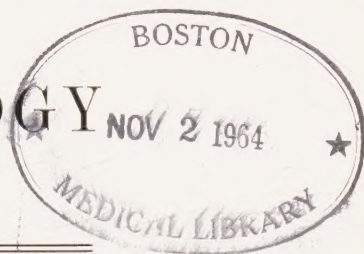


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SEBORRHOEIC ECZEMA: AN ATTEMPT TO DEFINE
THE SCOPE OF THE TERM.

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THE subject of this paper comprises nearly a quarter of the whole clinical material of a practising dermatologist. Moreover, it is a malady by no means limited to the skin, and indeed one that must be nearly universal to mankind because, to a greater or lesser degree and at some time or other in our lives, few of us escape it. Its manifestations present to the eye of the clinician a bewildering variety of visual experience, and to the clinical artist or photographer a constant challenge to his skill. Moreover, it is precisely when these claims to our interest are lacking that a carefully taken history is almost sure to yield something of interest to the student of human nature, and at the same time perhaps relieve the patient of the emotional tension that is responsible for the illness itself.

When I came to look up Unna's article in the *Journal of Cutaneous Diseases* of 1887 my eye fell at once on the next page to it, on an elaborate and indeed quite fascinating attempt to apply the Linnaean method of classification to skin diseases. I could not avoid comparing this with my own attempts to separate the lesions of seborrhoeic eczema into hyperplastic, exudative and necrotic. It is now obvious to me that such precision in diagnosis can be of little practical value, least of all in the handling of the patient. In this we are concerned first with his complaint, which may be one of disfigurement, discomfort or of disability, and then with the prognosis, immediate and more remote. This is not the time or place to discuss the technique of the healing art. We are here on the contrary to consider the physical changes in the skin, regardless of whether they are present because of some dis-ease of the spirit, or have been brought about by material factors which we may be able to control by the removal of external noxae, by the application of ointments and the like, or perhaps by improving the health of the patient by diet or the

administration of drugs. Therefore, in defining the scope of the term "seborrhoeic eczema" it is impossible to avoid some attempt to describe the changes in the skin itself.

I have already mentioned that seborrhoeic eczema is universal. This immediately distinguishes it from the only other kinds of eczema I recognize. One is fairly common, that is to say we see approximately one case for every 12 or so (43 : 543) of seborrhoeic eczema. This is variously called atopic eczema, flexural prurigo, disseminated neurodermatitis, and late exudative eozematoid. It is very nearly confined to a particular class of individual, sometimes physically and emotionally immature, and often having a family history of prurigo or asthma and a characteristic dirty yellowish complexion. The other one is rare, but is of immense interest because it always seems to me that it might contain the secret of chronic occupational dermatitis. I am referring to those of specific sensitization which have spontaneous or friction-provoked eczema as well. If I mention suspender clip dermatitis I don't think I need say any more except that I am sure that we have something different here from the well-known facile sensitizations of patients with seborrhoeic eczema. Cases do of course occur which cannot be assigned with certainty to any one of these main groups or perhaps to some transitional one, but in my experience they are extremely rare and I have nothing to say about them here.

It was Unna who described our syndrome and coined the term eczema seborrhoicum. We have moved a long way from Unna, but he is still worth bringing into any discussion of the matter. His classification of eczema was not, however, consistent. He began by distinguishing from vesicular eczema a "dry eczema," the manifestations of which he supposed to be partly due to the impregnation of all layers of the skin with fat and to the accumulation on the surface of the solid parts of the sebaceous secretions. He depicted dry and greasy pityriasis capitis and its transition into a weeping eczema of the scalp. From this and from the familiar succulent patches of eczema in the axilla which he describes as prone to spread to the trunk and upper extremities, he had no difficulty in extending his conception to a moist eczema of the backs of the hands and fingers. He also mentions an affection of the palms and soles said to resemble in the early stages a guttate psoriasis, and all sorts of psoriasiform eruptions having a predilection for the mid-line of the trunk and main sweat furrows, and finally he speaks of thickly crusted plaques on the legs. This definition of the scope of seborrhoeic eczema within the two dimensions of the skin is as comprehensive as one could possibly wish : but before we go on to consider how this definition has been subsequently modified it may be helpful, by way of providing context and perspective, to recall what Unna says in the same paper on the subject of infantile eczema. "My students," he says, "are well aware that there are three perfectly distinct

varieties, (1) the nervous eczema of dentition, (2) tuberculous eczema, and (3) seborrhoeic eczema." From his descriptions most of us would recognize his "nervous eczema of dentition" as what we now call infantile facial eczema, and his "seborrhoeic eczema" as differing only from the former in that it originated on the scalp. His "tuberculous eczema" which he then supposed "permits of a prognosis of lupus and tuberculosis" seems to have been what we would to-day call *seborrhoeic* eczema, complicated by conjunctival, upper respiratory, and other mucous membrane lesions, with an emphatic flexural distribution, adenitis and other features, including a tendency to persist up to the age of 4 or even much later. This familiar picture has even in recent times given many of us the strongest feeling that cod liver oil, fresh air and residence at the seaside were indicated in the treatment. Indeed in the early days of *calciferol* I gave it to several patients, the first two of which of course cleared up instantly and completely. That we can recognize Unna's word-pictures so easily shows, I think, that the gross visual sense impressions yielded by his patients match our own experience, though we cannot always follow him so closely when he starts to peer through his lens.

In 1902 Sabouraud drew attention to the essential relationship between such diverse clinical features as pityriasis simplex, acne, eczema seborrhoicum and alopecia seborrhoica, and pointed out their dependence on the sexual evolution of the individual. Juvenile pityriasis capitis was the effect of simple infection with the pityrosporon: at puberty it changed into pityriasis steatoides, the difference being produced first by saturation of the scales with an invisible exudation of serum, indicating both a permeable epidermis and incipient eczematization, and later by infection with *Staphylococcus albus*. Oily seborrhoea was supposed to be caused by the acne bacillus. It developed into acne vulgaris at puberty; and into calvities in adulthood, but in the male only. Inflammatory processes in the covering epithelium complicating pityriasis were attributed to *Streptococcus pyogenes* and those in the appendages to *Staphylococcus aureus*. His views in fact moved steadily in the direction of a belief that these superficial processes represented modified or abortive forms of impetigo.

Darier (1907) was the first to introduce the conception of a general constitutional disease or predisposition, probably endocrine in nature, which he called kerosis. This title comprises yellow or greyish discoloration of the skin, accentuation of the follicular orifices, a greasy or furfuraceous surface, a predisposition to acne, dandruff, eczema and "eczematides" (a name coined to signify the attenuated process of eczematization to which we will come later), all these being associated with debility, gastro-intestinal dysfunction and chronic upper respiratory infection. Kerosis was a very frequent predisposing condition, but not a prerequisite of the eczematides as it is of oily seborrhoea and acne. Darier's own conception of eczema seborrhoeicum seems to have

been limited to these "eczematides" which he classifies morphologically as follows :

- (1) Seborrhoeic dermatitis of scalp, lid margins and external auditory meatus.
- (2) Circinate eczematides of the midline of the trunk and hair margins.
- (3) Pityriasis rosea-like exanthems.
- (4) Follicular dystrophies of the trunk and extremities, including a small-pattern follicular rash on the trunk and pustular folliculitides of thighs and legs.
- (5) Psoriasis situated in the midline and main sweat furrows.
- (6) Certain exfoliative erythrodermias arising out of the conditions listed above.

It will be noted that frankly eczematous lesions—for example discoid eczema—are excluded.

Underlying the many clinical varieties of eczematide is a constant histological formula—acanthosis, spongiosis "*en petits foyers*," and parakeratosis. Darier regarded eczema seborrhoicum as a local bacterial dermatosis developing in a special terrain (kerosis), but considered that existing bacteriological evidence contained no clue to its real nature. For him it was a variety of eczema, and his conception of it had no room for the acute and crusted eruptions which he evidently classified as forms of impetigo. The eczematides differ from the eczemas in the attenuated form of their eczematization, their dryness, their sharp outlines and polycyclic form, their very prolonged persistence in the same aspect and in their ready response to treatment. Of impetigo he recognized three forms: (i) staphylococcal (or Bockhart's pustular) impetigo, which was supposed to be always traumatic (maceration, friction, etc.); (ii) streptococcal, or the impetigo of Tilbury Fox, of which he noted that it had no predilection for sex or age—I am just telling you what he said—and might be associated with lymphangitis, adenopathy, fever, digestive trouble and malaise. These complications oddly enough were usually absent in ecthyma which, all the same, he believed to differ only from streptococcal impetigo in the severity of the process, in the depth of the lesion, and in the predisposing debility of the patient; (iii) impetigo vulgaris—a mixed streptococcal and staphylococcal infection—in which he included annular and circinate impetigo as well as the nondescript crusted eruptions of childhood. He held that coryza and conjunctivitis complicating these conditions should be regarded as impetigo of the mucous membranes.

Barber (1922), who took a wide and comprehensive view in his clinical conception of seborrhoeic dermatitis, considered the underlying constitutional factor to comprise diminished alkali reserve, hyperglycaemia, faulty carbohydrate digestion, excessive carbohydrate feeding, hepatic insufficiency, lack

of fresh fruit, lack of exercise, and anaemia. During the following 25 years, though not in the least abandoning his belief in the importance of bacterial infection, he has repeatedly drawn our attention to the importance of endocrine factors in seborrhoeic manifestations, and has helped to explain the close inter-relation of emotional and metabolic states.

MacLeod and Dowling (1928), using what they believed to be cultures of the pityrosporon, succeeded in reproducing the lesions of seborrhoeic dermatitis by injecting intradermally or rubbing into scarifications a suspension of monilia. In non-seborrhoeic subjects they obtained only groups of papules; but in either case these artificial lesions were only transitory. Later they obtained very similar results with suspensions of *Monilia pinoyi*, and after the publication of mycological studies of Moore (1936) and Bigham (1938) they realized that they had been mistaken. Moore, Kile and Engman (1936), however, successfully confirmed their findings both with genuine pityrosporon and with other yeast-like organisms. Bigham (1938) showed that the pityrosporon is a universal inhabitant of the scalp, but is not found elsewhere except in seborrhoeic patients. It is often but not always found in the lesions of seborrhoeic dermatitis, never in other kinds of eczema. Dowling, who in 1939 still considered seborrhoeic eczema to be a yeast infection, agrees with Darier that "eczematides" frequently occur in non-seborrhoeic subjects, and at the same time believes that other constitutional forms of eczema, the asthma-prurigo syndrome and "the tendency to eczema which dwells within certain individuals" or "*eczema-maladie*" determine the eczematous component of seborrhoeic eruptions.

Ingram (1931) speaks of an abnormal secretory function of the skin, hypersensitivity to internal and external irritants, vasomotor instability and diminished resistance to infection. Similar conditions obtain in the mucous membranes, especially of the upper respiratory tract. There is evidence also of endocrine imbalance in the high incidence of seborrhoeic manifestations at puberty (acne) and the menopause (lichen circumscriptus and erythematous seborrhoeides of the face). "Perhaps only dandruff and midline seborrhoea corporis can be said to occur in a subject with no constitutional deviation from the normal." In 1938 he considers that the seborrhoeic subject "is not just an individual with a greasy skin: he has upper respiratory catarrh, dyspepsia, constipation, anaemia, nervous instability and probably an avitaminosis. Moreover it is inconceivable that an affection so intractable as seborrhoeic sycosis can be a simple infection." While seborrhoeic eczema is certainly "not a simple blood-borne toxic manifestation of a septic focus," he believes that his 31 septic foci among 50 private cases and 45 antral septic foci in 62 hospital cases were more likely to have been causal than parallel infections. He advocates eliminatory surgery, rest, antiretentional diet, nutritional rehabilitation, cotton next to the skin, psychotherapeutic measures and local

treatment with malachite green. In 1939 Ingram classifies seborrhoeic manifestations into (1) infective—pityriasis capitis, seborrhoea corporis and eczematides, (2) physiological—acne and rosacea, (3) constitutional—the eczematous forms. He still considers focal sepsis of great aetiological significance.

Percival (1939) also divides the clinical manifestations of seborrhoeic dermatitis into three groups, (1) pityriasis capitis, the eczematides, "infective pityriasis," etc., (2) flexural infective dermatitis (intertrigo) and exudative

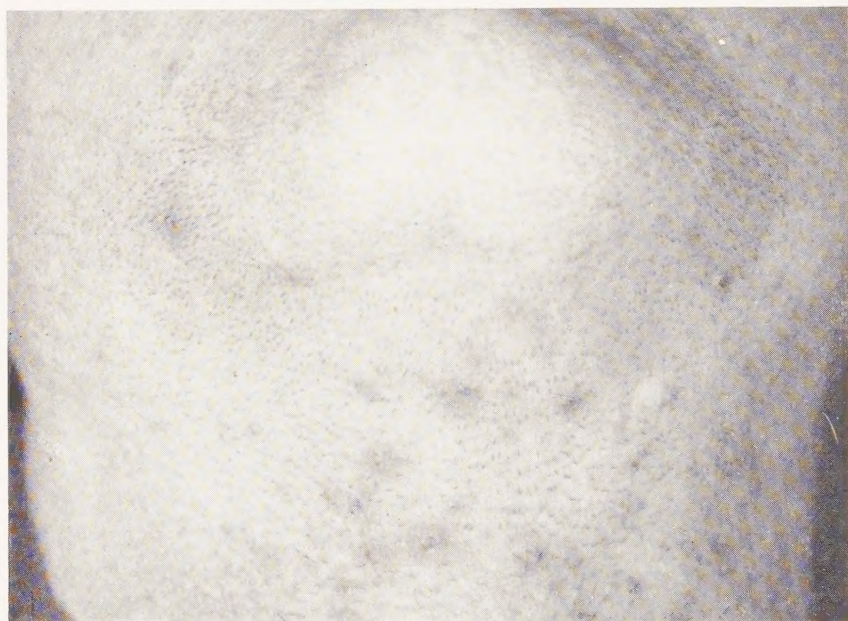


FIG.1.—The front of the neck. This photograph was taken, in the case of a man who had a large area of "psoriasiform infective dermatitis" on his leg, primarily in order to demonstrate the relationship between the two lesions. The lesion illustrated here is, of course, exactly the same as that of the acute papuloexudative seborrhoeide of face and neck. Several stages are represented: the hyperaemic papule with tiny grey necrotic spot; the latter dried off to form a little scab; a "vulnerable urticarial papule" that it to say that some papules do not develop the necrotic spot but very easily have their top rubbed off.

infective dermatitis, and (3) the pustular and pustular-eczematoid affections of hairy parts . . . "follicular infective dermatitis." He considers that each of these groups constitutes a distinct clinical entity; in the first place because of the specific type of associated organismal infection (pityrosporon, streptococcus and staphylococcus respectively), in the second place because of the differing character of the eczematous reaction in each of the three types, and finally because of their response to antiseptic treatment—good, intolerant and recalcitrant. He deprecates lumping them all under one title, especially

one with such a misleading name. While he agrees that the alleged infective agents cannot be made artificially to reproduce the lesions, he thinks that this group of dermatoses should be provisionally regarded as infective.

Those of us who before 1939 used to apply the label "impetigo" indifferently to all kinds of crusted exudative eruptions on the face, must from time to time have speculated on the nature of the hyperaemic papules or "pimples" that somehow or other used occasionally to be found on wrists or on the ante-cubital flexures. This pimple is not only "quite unlike the metastatic eruption



FIG. 2.—These two cases illustrate the lesion of seborrheic eczema which consists of necrosis of the epidermis to form a celluloid like crust through which tiny lakes of—often sterile—pus can be seen.

of eczema,"* but is easily recognizable as completely distinct from any other lesion of the skin. It is nearly always possible to identify at least one of them in every case of crusted seborrhoea. It is oval in shape and firm in texture ; at the apex it bears a tiny grey spot which is not necessarily situated at the opening of a hair follicle nor is it ever elevated (Fig. 1). Histological section shows that it represents a tiny area of necrosis in the rete filled with debris and leucocytes. It does not seem to be a vesicle because it is not associated with

* I have searched the literature in vain for the source of this quotation, which I found among some rough notes : not because I am ashamed of my pimple, but because I believe it to be so important that I hesitate to claim priority in describing it.

spongiosis.† This papule is not only closely related to what Avit Scott called "the odd septic follicular pimple that anyone may suffer from occasionally," but it also forms a link with ecthyma. When these papules are numerous enough to be confluent a group of them may lead to an area of necrosis of the



FIG. 3.—"Discoïd eczema" "Pachy eczema of the extremities" "Toxic erythema" (O'Donovan) is much more often associated with boils and other manifestations of seborrhoea than can be explained by coincidence. (Reproduced from the *British Journal of Physical Medicine*.)

rete, as the result of which the epidermis is converted into a more or less transparent celluloid-like scab (Fig. 2). Ecthyma does not occur on the face presumably because of the superior vitality of the skin there, and its abortive form

† Its further study awaits the general acceptance of my own belief in the harmlessness of the cutaneous pus-cocci. I may mention here that my biopsy wounds healed uneventfully.

is what we call streptococcal impetigo—distinctly uncommon after the age of 20—which is characterized by stuck-on sigilliform crusts. I must digress here just to mention that what I identify with the impetigo of Tilbury Fox—bullous or circinate impetigo—is an entirely different matter, and has nothing whatever to do with seborrhoea.

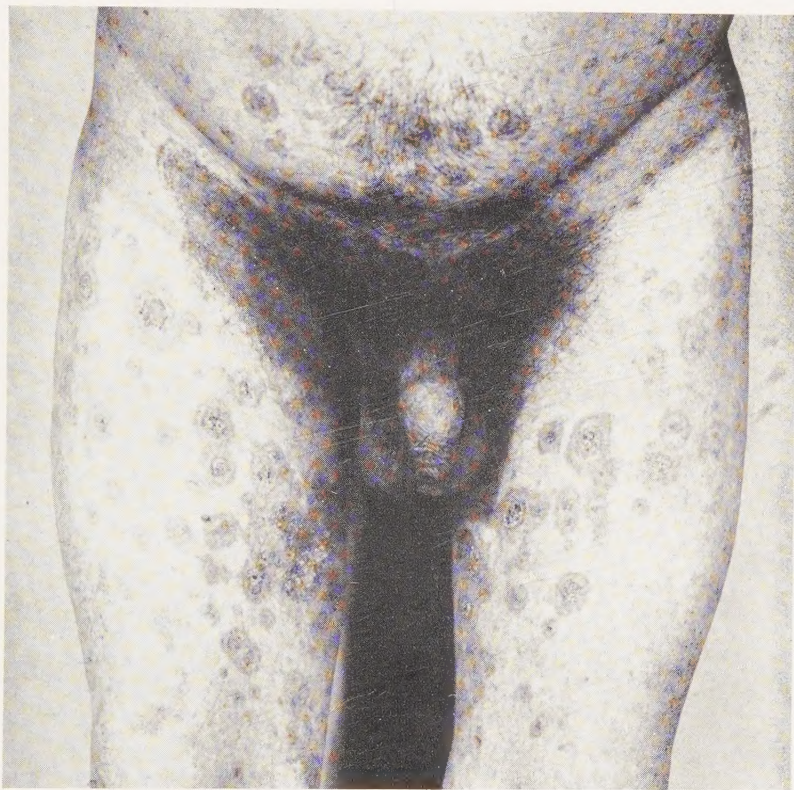


FIG. 4.—This is one of the less frequent lesions in seborrheic eczema. In this particular case it did not persist in the same form but eventually by confluence formed a continuous plaque, involving both thighs, pubic region and belly, of the familiar type.

Single lesions of this type in the supraclavicular fossa or deltoid region are not uncommon.

Now the essential lesion in all forms of exudative seborrhoea is an erythema. The papule I have just mentioned is one form of it; another form is what O'Donovan calls "toxic erythema" but for which most of us prefer the name "discoïd eczema" (Fig. 3), but space would not permit a complete list. It is probably enough to say that the special feature of the erythema of seborrhoea is that the noxa producing it has a strong affinity for the epidermis: so that at the very least it will disturb the nutrition of the epidermis enough to cause desquamation. But every possible epidermal disturbance, from merely acceler-

ated growth, through vesiculation—microscopic or eczematoid—to complete necrosis (as in ecthyma or streptococcal impetigo) may occur, thus accounting for the great variety in the clinical picture of seborrhoeic eczema (Fig. 4). For example, where the epidermis is thin and the dermis of loose texture, as in the retroauricular folds, the process is diffuse, and may develop without any visible lesion at all until crystals of dried exudate appear on the surface or a slight pull on the ear produces a deep crack at the bottom of the fold. When, on the other hand, a stable equilibrium is maintained between the individual and this hypothetical noxa, then the only visible result may be a disturbance of epidermal metabolism comprising (i) seborrhoea—that is to say, excessive production of unsatisfactory, often evil-smelling sebum, (ii) trichorrhoea—diffuse or systematized loss of scalp hair or else the opposite, hypertrichosis lanuginosa, and (iii) keratorrhoea—excessively thick opaque or ill-formed and permeable horny layer, comedones, etc. If we accept this hypothesis then we have an explanation of the apparent paradox, often noted in the literature, that exudative seborrhoeic eczema is not necessarily more prevalent in people with dandruff or acne.

As regards follicular lesions I would join Avit Scott in including in seborrhoeic eczema furuncles, the papules and pustules of acne, and impetigo of Bockhart. I would not go so far as to include oil acne, but I do include the so-called recurrent afebrile cellulitis of the face, for the explanation of which Avit Scott invokes the aid of the fissure in the nostril, which is by no means always to be found. And furthermore I suspect that in certain cases of chronic urticaria it is with the noxa of seborrhoea that we have to deal.

There can be little doubt about the adenitis which has so often been observed to precede attacks of papulo-exudative seborrhoea, or about the coryza; and certainly no doubt at all about the conjunctivitis which oculists with military experience easily recognize before the cutaneous signs make their appearance. I think we are all familiar too with the gastro-intestinal symptoms which sometimes precede an acute attack of seborrhoea by as much as 10 days. To my mind indeed it is these so-called “complications” that so clearly distinguish the general malady seborrhoea from impetigo, which may or may not be a superficial infection.

At the risk of over-simplification I am going to offer you a classification of inflammatory seborrhoea which I owe to Dr. James Coburn:

Pure vascular response: Erythematous, erysipeloid, and urticarial forms.

Primary vascular response with secondary epithelial participation: Exudative seborrhoea with or without coryza and chronic upper respiratory catarrh.

Epidermal response overshadowing vascular component: Patchy eczema of the extremities, cheiropompholyx.

It is fortunately not within my terms of reference to discuss the nature of my hypothetical circulating noxa but I would like to say just two things about it. There is a striking similarity between certain sulphonamide eruptions and seborrhoeic eczema: for example the mitten-like distribution of the eruption on the back of the hand which is common to both, and again the enlargement of the spleen in the one and adenitis of the other. The second point to which I want to draw your attention is that all the signs of seborrhoeic eczema, except perhaps recurrent facial cellulitis, can be provoked by infestation with *Pediculus vestimentorum*. I have myself seen, in pure morphological character

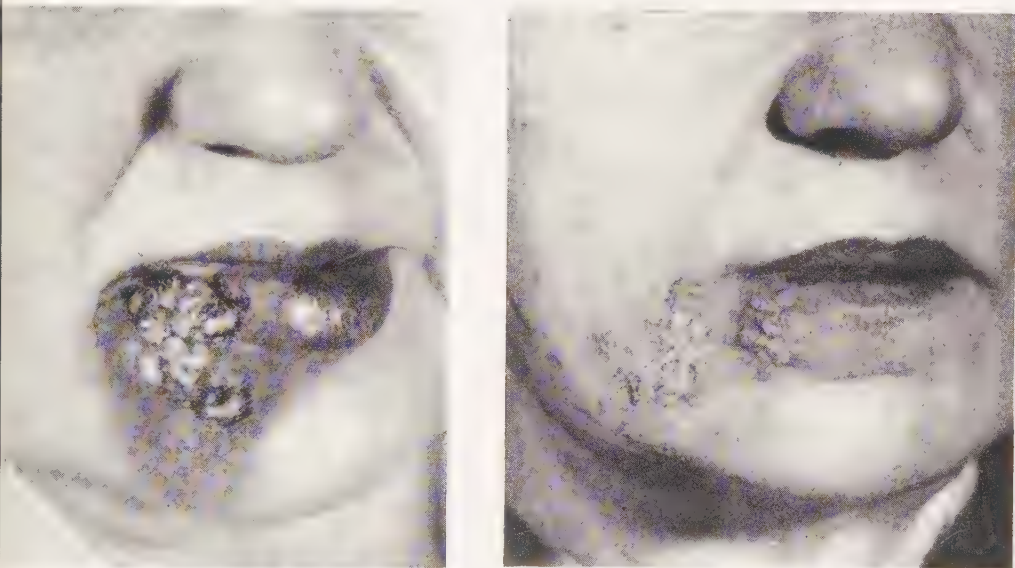


FIG. 5.—These photographs were taken at the interval of a month. Before the carbuncle the patient had had no skin trouble. The second photograph shows the initial patch of a widespread patchy eczema. Note that its centre does not coincide with that of the carbuncle.

unadulterated by any sign of excoriation or sepsis, urticaria, diffuse papulo-vesicular eczema, patchy eczema of the extremities, flexural lichenification, and pustular folliculitis: and I well remember a case in which I would have diagnosed pityriasis rosea with little hesitation but for the fact that I was specifically examining patients supposed to be infested with lice. Furunculosis, crusted exudative seborrhoeic eczema and other impetigo-like pictures, not to mention eruptions in which any of the foregoing lesions may be assorted, also occur, but are much more common in pediculosis capitis and scabies.

Just one more point, and that is the significant frequency with which a chronic seborrhoeic eczema originates in the neighbourhood of an injury—bruise, cut or burn—but quite often without breach of surface, usually about

10 days after the event. You will I expect have noticed that the initial patch rarely exactly surrounds the scar (Fig. 5). I have often wondered but have never been able to establish—for most of my cases have been in workmen too fascinated with the economic implications of their alleged 24B to be capable of supplying a history—if this initial site of attack corresponds with some area of hyperalgesia associated with injury to a cutaneous nerve.

There is nothing very clearly in common between the drugs I have mentioned, the sort of toxin or infection that might be introduced by the bite of an insect, and local damage to a cutaneous nerve: but I mention these things in order to remind you that, however difficult it may seem to include all the clinical phenomena I have described within the definition of seborrhoeic eczema, it must be still more difficult to find any order in the events that appear to bring them about.

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THE PROBLEM OF THE PATHOGENESIS OF ENDOGENOUS ECZEMA.

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FROM earliest times attempts have been made to classify diseases of the skin. Hippocrates laid the foundation of an aetiological classification when he divided these diseases into local and constitutional, a division which is important to remember even to-day, although with increasing knowledge the sharp cleavage previously so obvious between these two groups is becoming more and more difficult to define. In 1778 Willan, who used the topographical appearance for his groups, modelling his classification on that of Plenck, postulated eight orders of cutaneous disease. One of these, *Vesiculae*, contained seven genera of eruptions: varicella, vaccinia, herpes, rupia, miliaria, eczema and aphtha. Some eighty years later, in 1857, Erasmus Wilson, having previously constructed a physiological classification, introduced his aetiological classification of skin diseases, founded upon the cause of the disease, and he retained only miliaria in the eczema group.

Since that time the precise meaning of the word "eczema" has been the subject of much discussion, and not only do dermatologists of different countries disagree over their interpretation of the term, but even amongst dermatologists of the same country there is a good deal of difference of opinion in its use.

Therefore I must first of all define my meaning of the term, and I feel that I cannot do better than use the conclusions reached by Sézary and Horowitz (1936). After a long review of the differing views of the Continental schools they conclude that "eczema is a pathological entity, and includes all types of epidermo-dermatitis resulting from an allergic reaction of the epidermis and is characterized by a moderate degree of spongiosis."

The term "eczema" therefore, embraces those labels used commonly in this country—sensitization or contact dermatitis and idiopathic eczema—but does not include traumatic dermatitis or dermatitis caused by primary irritants. There was a time when the word "eczema" was going out of use in England, and it may be that it is coming into favour again because of the inevitable association of the word "dermatitis" with workmen's compensation.

For the purpose of this short paper I am going to exclude infantile eczema from my remarks, since I think that this differs in many ways from the conditions I regard as belonging to the eczema group. I feel that infantile eczema or atopic dermatitis bears the same relationship to the eczema we are discussing as asthma does to bronchitis. It is very uncommon to get a history of infantile eczema in a patient suffering from so-called nummular eczema.

The problem of the pathogenesis of eczema is the problem of cellular sensitization in general and of epidermal sensitivity in particular. I believe that although the triggers which start the process in the epidermis may be various, there are no essential differences between the changes produced in the skin in contact sensitization dermatitis and in endogenous eczema. In both, the patient notices erythema, irritation, vesiculation and perhaps weeping of the skin and the microscopic appearances are identical. Unfortunately, little is known about the exact mechanism of the production of this state of increased sensitivity or allergy. With contact eczema, in the development of sensitivity of the cells, the following factors appear to play a part: contact with the sensitizing substance, idiosyncrasy of the individual's cells, the age of the patient and emotional upset.

It is probable that epidermal sensitization, at any rate in the case of external contact sensitization, never occurs without previous contact with the sensitizing substance, although in some cases the duration of this contact may be very short. This sensitizing time depends on some idiosyncrasy of the patient, and it is of interest to remember that as long ago as 1813 Bateman stated that the condition occurred in patients with a constitutional irritability of the skin. Cranston Low and Bruno Bloch have both demonstrated this individual difference in the ease of producing skin sensitization.

Age of the patient plays a part, and in my experience contact sensitivity is extremely uncommon before puberty. When one considers how easily adults are sensitized to sulphonamide applications and to a certain extent to penicillin preparations, and bearing in mind how commonly these substances are used in treating various pyodermas in children, one appreciates that contact dermatitis due to them is very rare; this must indicate that the child's skin is not easily sensitizable to external allergens. Randolph and Rollins (1950), in the report of the first clinical ACTH conference, state that "ACTH materially relieves certain acute and chronic allergic symptoms in addition to affording protection to the allergic individual from the experimental exposure to allergens for which he has a specific sensitivity." It therefore seems that alteration of hormonal balance plays a part in the ease of production of cellular sensitivity, and that the balance before puberty is such that the establishment of sensitization in the skin is extremely difficult.

Emotional upset also renders the skin more sensitizable—again it might be due to some hormonal factor associated with the stress adaptation syndrome, and in passing I would like to recall that Erasmus Wilson, in 1863, gives as one of the causes of eczema, "affections of the nervous system (such) as mental emotions, particularly of the depressing kind."

One of the most interesting phenomena of epidermal sensitivity is the spread of the sensitivity to cells other than those which have come into contact with the allergen. The patch test is an everyday proof of this and the mechanism

responsible for this spread is still not fully understood in spite of a great deal of investigation. Sulzberger's (1930) work with neoarsphenamine established the fact that in order to produce sensitivity of the skin to any substance it is necessary for the allergen to come into contact with epidermal cells. His experiments are proved clinically in sulphonamide sensitivity. Although, during the war, sulphonamide preparations were used extensively on wounds, deep burns and in the peritoneal and pleural cavities, sulphonamide epidermal sensitivity did not occur if the preparations did not come into contact with epidermal cells. However, although contact with the epidermal cell is necessary for the establishment of contact sensitization eczema, the very interesting experiments carried out by Haxthausen (1943) in identical twins showed conclusively that this property of sensitization does not remain localized to the skin. In later animal experiments (1947) the same worker indicates that this property resides in some constituent of the blood stream, and Landsteiner and Chase (1946) were able to obtain passive transfer of eczematous sensitization by using cellular exudates and pieces of tissue obtained from lymph glands and spleens of sensitized animals. Rostenberg (1947), in a review of this problem, came to the conclusion that the mechanism for the general spread of sensitization is that the sensitizing substances react locally when applied to the epidermis to form a compound allergen; this compound allergen is rapidly absorbed from the site of origin and disseminated throughout the body ready to react if and when the original sensitizing substance again comes into contact with the skin anywhere. He was of the opinion that macrophages are concerned in the formation of this compound allergen. In connection with this theory and with the view of Landsteiner and Chase that the lymphocytes might play a part, it is of interest that the administration of ACTH, as well as diminishing the number of eosinophils in the blood stream, also causes a lymphocytopenia. Dougherty and White (1947) have done a great deal of work on the association between the suprarenal cortex and lymphoid tissue and their view that this lymphocytopenia is due to diminished numbers of lymphocytes entering the blood stream was confirmed by Yoffey and his co-workers (1951). They showed that there was no evidence of increased destruction of lymphocytes in the bone-marrow after giving ACTH, but that the lymphocytopenia was due to an absolute diminution of lymphocytes reaching the blood stream from the thoracic duct coinciding with an increase in the lymphocyte count in the bone marrow.

It thus appears that the known power of ACTH to inhibit cellular sensitization may be associated with its action of inhibiting lymphocyte formation, particularly if it is correct that the agent for the dissemination of cellular sensitivity, at any rate as far as the skin is concerned, resides in the lymphocyte.

Recently, Sulzberger and his co-workers (1951) report that a case of nummular eczema was considerably improved with ACTH and local treatment, but

in three patients who were sensitive to poison ivy, paraphenylenediamine and leather materials respectively, administration of ACTH diminished the size of patch test reaction in the first but had no effect on the other two. This might only mean, of course, that on the dosage used the depression of sensitivity was not great enough to show any differences.

With the spread of sensitization to the whole body one often sees, in a case of contact sensitization dermatitis, secondary areas of eczematized dermatitis appearing on other parts of the body not in contact with the original sensitizing substance. These secondary areas are frequently symmetrical, and often there is no apparent cause determining their distribution. It is probable that a minute amount of the sensitizing substance enters the blood stream through the skin and, wherever it comes into contact with epidermal cells, starts off the train of events we see as eczematized dermatitis.

Now, endogenous eczema is probably just this same process occurring, but in this case the original sensitizing agent arises somewhere within the body. The fact that the skin can be affected by allergens from within to produce the picture of eczema as well as by allergens from without is illustrated by the work of Rowe (1946), which has been confirmed by others (Livingood and Pillsbury, 1949; Guthrie and Mandel, 1951), that some cases of eczematous eruptions are due to certain ingested foods. When these are removed from the diet the lesions clear up quickly, only to return when the foods are again eaten. Thus, if the skin can become sensitized by endogenous contact to the products of digestion of certain foods, it is not difficult to imagine that it may also be sensitized to various products of the body metabolism and even, perhaps, to toxins from some internal focus of infection. This leads directly to a consideration of whether the skin ever becomes sensitized to its own breakdown products. Whitfield introduced the term "auto-sensitization," but I think that it has never been definitely established that this phenomenon in its most exact sense occurs. But at least it has been found possible to produce precipitins in animals to a mixture of their own skin and staphylococcal toxoid; and clinically one not uncommonly sees patients with an eczematoid sensitization dermatitis produced by the application of penicillin cream to an area of impetigo, who give negative patch tests to penicillin, to the cream base and to the two together. It appears that in these cases it is necessary for the skin cells to be in contact with not only the penicillin cream, but also either organisms or the breakdown products of the skin or both, for sensitization to be established.

The existence of auto-sensitization once the skin has broken down is a very attractive hypothesis for the explanation of the very difficult cases of recurrent eczema. That the skin becomes sensitized to organisms is well established and I believe that seborrhoeic eczema is of this kind, the pattern and distribution of the eruption depending on the individual patient. When all is said and done, we know very little about the factors determining the site of eruption

in different diseases. Why should the specific fevers produce a rash in definite sites, why should pityriasis rosea nearly always affect the trunk, and why should lichen planus favour the anterior aspect of the forearms? The answer to the problem of the distribution and pattern of seborrhoea is, in my view, bound up with this general question.

It is probable that in the skin the first reaction to the allergen, whether it comes into contact with the skin from within or from without, is the formation of the primary vesicle described originally by Civatte and subsequently found by several others. This is the trigger, then, which sets in motion the process of vascular dilatation in the dermis and spongiosis in the epidermis which we recognize as eczema.

I have made a rough analysis of the new cases of eczema for which no specific cause was found, attending the Skin Department in Sheffield in 1949 and 1950. None of these cases had eczema in infancy. In 1949 there were 299 cases, and in 1950 336, out of a total of 1698 in 1949 and 1760 in 1950 of cases of all types of dermatitis. In analysing them into age groups I have put the two years together (Table I). It is seen that only in the second decade is there any

TABLE I.

Age (years).	Male.	Female.
0-9 . . .	17	18
10-19 . . .	49	100
20-29 . . .	57	61
30-39 . . .	67	40
40-49 . . .	45	55
50-59 . . .	32	21
60- . . .	46	27
	313	322

significant difference between the sexes, and it is due to the very common occurrence of nummular eczema of the hands of girls about the age of puberty.

The hands are by far the commonest site affected (Table II), and it must be that in a subject constitutionally liable to this idiopathic eczema trauma plays

TABLE II.

Site of onset.	Site of onset.
Hands . . . 354	Trunk . . . 54
Arms . . . 86	Legs . . . 91
Face . . . 37	Feet . . . 45

a large part in the determination of the localization of the onset. It may mean that the endogenous allergen requires, in some cases, the presence of the products of epidermal damage for the eczema reaction to be produced, just as happens sometimes with penicillin cream sensitization. That these patients are not suffering from a sensitization eruption to some specific external allergen is shown chiefly by the patchy distribution and, up to a point, by negative patch tests.

SUMMARY.

- (1) This type of eczema differs from atopic dermatitis.
- (2) The eczematous reaction can be provoked in the skin by allergens coming into contact with the epidermis either from without or from within.
- (3) There is no essential difference between these two types of reactions.
- (4) Epidermal sensitivity is uncommon before puberty.
- (5) The spread of epidermal sensitization is probably achieved through the lymphocytes, and this fact may be connected with the effect of ACTH in diminishing sensitization reactions.
- (6) Skin damage may determine the site of onset of some cases of endogenous eczema.

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A STUDY OF A NEW SPECIES OF THE GENUS MICROSPORUM.

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DR. JACQUELINE WALKER (1950*a, b*) has pointed out that within the species *Microsporum canis* (Bodin), whose growth on culture media characteristically shows a yellow colour, there exist some variants of a different colour, for which she proposed the denominations of *albus* and *citreus*.

After reading those papers we were prompted to describe the existence of another *Microsporum* of human origin, at least in our cases, which we at first took to be a variant of *M. canis*, though of different appearance. However, after a careful study we have reached the conclusion that it must be considered as a new species, or at least as a degenerate form of *M. canis*, found as such in the infected subjects.

Both the clinical aspect of the lesions and the microscopical picture of the infected hair are very much like those shown by *M. audouini* infections, but the morphological aspect on culture media is quite different from that which is accepted as characteristic for that fungus. Neither can it be identified as *M. canis*, despite some resemblance (we will insist later on this point), nor as other fungi of genus *Microsporum*, as for instance *M. iris*, *M. ferrugineum*, *M. equinum*, *M. circulus centricum*, *M. aurantiacum*, *M. simiae*, *M. obesum*, *M. fulvum*, *M. tomentosum*, *M. villosum*, *M. pubescens*.

CASE REPORTS.

Among the cases from which the fungus was isolated we shall quote the following :

CASE I.—No. 137, S. C—, a 4-year-old child. A fortnight previously a single squamous patch appeared on the parietal region. At the time of examination the patch had a diameter of 3 cm. All the hairs on the patch were affected ; they were broken, covered with a thin white sheath and some were included within the scales, which were abundant enough to give to the patch the appearance of a *teigne amiantacée* (Alibert). Examination with 40% liquor potassae showed the presence of a sheath of small spores, just as in a typical case of microsporiasis. Cultivation on media allowed us to isolate the fungus, which we describe below. The patient was submitted to a Roentgen epilation followed by rubbing with a solution of iodine. The recovery was uneventful.

CASE II.—No. 138, M. C—, a child 7 years old, the brother of Case I. He showed multiple patches of a diameter of 1 to 1.5 cm., with abundant scaling, which included plenty of hair within the scales. Other hairs appeared broken and covered by a white sheath. Microscopical examination showed the typical picture of a microsporum. In culture we isolated the same fungus as in the previous case. In these two cases the disease was acquired in Barcelona.

In another case the clinical picture was of a slightly more inflammatory appearance :

CASE III.—No. 132, J. L. C—, 14 months old. The lesion appeared when the patient was in Calahorra, in the province of Logroño. At the beginning it was covered with a layer of grey scales, not inflammatory, but lately another rather inconspicuous lesion appeared, with production of yellowish scaly crusts, followed by spontaneous epilation. The patient showed five patches, each of a diameter of about two centimetres, together with a number of smaller patches. The microscopical appearance of the hair was that of a typical microsporidium. On culture media was isolated the fungus we are studying.

STUDY OF THE CULTURE.

On Sabouraud's medium or on our own media of amino-acids the fungus developed comparatively quickly, for at a temperature of 25° C. it reached a diameter of 3.5 cm. after 10 days. At the beginning a fine aerial whitish, cotton-like mycelium appeared ; after a few days this mycelium took on a canary-yellow colour, visible on the front of the colony, but somewhat mixed up with part of the aerial mycelium which preserved its whitish colour. The yellow colour was still more obvious on the back of the colony, where it prevailed absolutely. At the beginning there was a central cotton-like tuft while the rest of the colony was flat, but with a certain tendency to form concentric zones, wherein the intensity of the yellow pigment was variable.

In older cultures the surface of the colony, instead of showing a fine cotton-like appearance, was on the contrary made up of a whiter mycelium more closely compressed and radially divided by a great number of furrows, which starting from the central button radiated towards the periphery (Figs. 1 and 2). The colony still preserved its yellow coloration by transmitted light, and the colour was also obvious on the back of the colony. These cultural characteristics have remained constant through 38 subcultures up to date. In some cases we have seen dysgonic colonies : flat, glabrous moist colonies with fine radial folds, which take an intense chocolate brown colour, but which in subcultures have reverted to the typical characteristics.

The points of similarity and of difference between *Microsporum canis* and the fungus described by us are set out in the following table (Table I).



FIG. 1.—Culture on glucose agar.



FIG. 2. —Culture on maltose agar.

TABLE I.

<i>Microsporium canis.</i>	<i>Microsporium</i> 137 VC.
Growth :	
Rapid, 9-10 cm. at 30 days	Rapid, 7-8 cm. at 30 days.
Appearance on culture media :	
On maltose agar : Flat, powdery centre, chamois in colour and umbilicate. Woolly outer zone, prominent, remaining snow white.	On maltose agar : Woolly central dimple surrounded by a first zone with numerous radial folds, of light brown colour and nearly glabrous ; a second zone with a white woolly loose aerial mycelium. Pleomorphism developing in any one zone of the colony surface as a dense woolly white tuft.
On glucose agar : The woolly ring is irregular and the underlying radial furrows are yellowish.	On glucose agar : White woolly colony, with white aerial mycelium ; underlying furrows of yellowish colour ; reverse yellowish. Sometimes brown glabrous colony.
On potato : Colony woolly, white with red pigment at the margin.	On potato : Brown violaceous pigment diffused about the colony.
On Conant's medium : Woolly growth white or pink, later powdery with a diffusible pigment (yellowish, cinnamon or pinkish).	On Conant's medium : Woolly colony, at first white, later centre light pink violet with yellowish spots ; a diffusible yellowish pigment is present.
Microscopic appearance :	
On glucose agar :	On glucose agar :
Racquet mycelium	Racquet mycelium.
Pectinate hyphae.	No pectinate hyphae.
Closterospores abundant	Closterospores very rare and commonly rudimentary.
„ spindle shaped.	„ spindle shaped.
„ 2-10-celled, covered with a granular membrane thicker on the central cells.	„ only 2-7-celled, covered with a smooth membrane not thicker on the central cells.
Aleurospores rare, sessile or pedunculated.	No sporiferous hyphae.
Lateral protuberances isodiametric.	No aleurospores.
Spirals.	No spirals.
	On Conant's medium :
	Closterospores abundant, incurvate, with blunt ends, hyaline, smooth membrane with uniform thickness, 2-15-celled, and measuring 28-100 $\times$ 8-16 μ .
	No spirals.
	Aleurospores sessile (4 $\times$ 2 μ) not very abundant.
	Lateral protuberances isodiametric.

The appearance of the infected hair is typical for microsporidia. Microscopically, a sheath of spores can be observed around the hair. Inside the hair mycelial filaments can be seen disposed longitudinally : in one of our cases these were substituted in part by elongated air spaces. In some of the follicles there were thick undulating mycelial filaments, which on examination with caustic potash did not appear to be septate.

Microscopical examination of the cultures showed the presence of a mycelium sometimes continuous but at other times septate, some typical hyphae in the shape of a racquet, absence of pectinated hyphae and a few fusiform macro-

conidia; these were very elongated, sometimes not septate and at other times producing from two to seven cells (Figs. 3 and 4). Sporiferous hyphae and microconidia could not be demonstrated.



FIG. 3.—Closterospores. The wrinkled and granular appearance of the membrane of the closterospores is due to the fixative agent and to the stain. Culture on slide (glucose agar) ten days old. Stained with cotton-blue. $\times 320$.



FIG. 4.—Microscopical aspect of the cultures.

We believe, in consideration of the features we have mentioned, that we are not dealing with any of the varieties of *Microsporum* already described, but with a new species.

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A STRAIN OF *MICROSPORUM AUDOUINI* PRODUCING NUMEROUS MACROCONIDIA ON CULTURE.

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SABOURAUD (1910) stated that macroconidia are rarely found in cultures of *Microsporum audouini* and that those which are seen are small and rudimentary. Most authors share this opinion, but Emmons (1934) observes that a few macroconidia can be found in most strains, at least on first isolation. He suggests from their appearance that *M. audouini* may be a degenerate form of *M. canis*, in cultures of which macroconidia are characteristically abundant.

A fungus with all the characteristics of *M. audouini*, but showing numerous macroconidia on culture, has been isolated from a case of tinea capitis. Its behaviour on culture has been compared with that of typical strains of *M. audouini* and *M. canis*.

CLINICAL ASPECTS.

The patient was an English girl of six who had not been out of England since infancy. The case was not part of a known epidemic, no other member of the household had any skin disorder, and no pets were kept. The lesions were limited to the vertex, and consisted of two discoid scaly areas each about 3 cm. in diameter. In these patches the hair was broken off near the scalp, which was not inflamed. The hair stumps fluoresced with a clear, bluish-green colour under Wood's light and showed spore-sheaths typical of *Microsporum* infection on microscopical examination.

LABORATORY STUDIES.

Infected hairs inoculated on beer-wort agar slopes showed evidence of growth within a few days. After ten days the colonies measured a few millimetres in diameter and were pure white in colour. They consisted of dense mats of mycelium closely applied to the medium, with a few coarser, translucent aerial hyphae. Microscopically a branching mycelium was seen, with numerous terminal or subterminal chlamydospores. After three weeks' growth the colonies had attained a diameter of approximately 1.5 cm., were velvety white, and exhibited a dark brown pigmentation of their reverse surfaces. At this stage microscopical examination revealed numerous clavate microconidia and spindle-shaped macroconidia. The latter were abundant (Fig. 1), although not present in the striking profusion one associates with *M. canis*. Some were

bizarre, like those depicted by Sabouraud (1910), while others were well formed and approached in appearance the macroconidia typical of *M. canis*. They measured from 20 to 88 μ in length and from 4 to 14 μ in width. Most were thick-walled, with two or three transverse septa. Some, apparently mature macroconidia, were non-septate, while a few showed as many as eight cross-walls. Their surfaces were in most instances smooth, but some were studded with short tubercles which were most evident when the material was examined without mounting-fluid. Some macroconidia were sessile, but the majority were borne singly on short conidiophores (Figs. 2, 3, 4 and 5).

Very similar gross and minute appearances were seen in cultures on maltose and glucose agars, colonies on the latter showing a pinkish buff colour on their

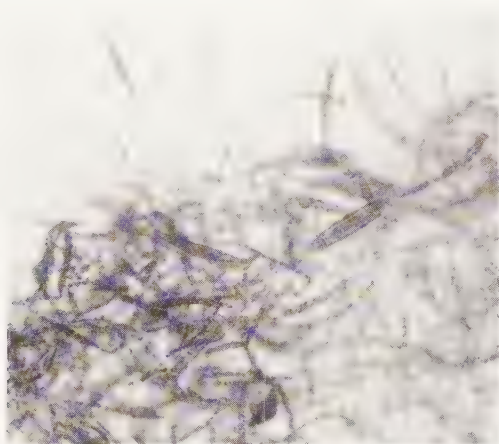


FIG. 1.—Photomicrograph of a culture of the atypical strain of *Microsporum audouini* stained with cotton blue. $\times 208$.

reverse surfaces. Giant cultures developed central prominences and marked radial furrows (Fig. 6). No pleomorphism has developed on repeated subculture maintained for over a year. Macroconidia continue to be formed, but are less numerous than in the initial cultures.

In general the morphology is that of *M. audouini*. Other evidence as to the identity of the species was obtained:

(i) Culture on sterilized rice grains (Conant, 1937) produced negligible aerial growth but marked tawny pigmentation of the medium.

(ii) Hyphal fusions (Davidson, Dowding and Buller, 1932) were repeatedly demonstrated between colonies of this strain and *M. audouini* but never with *M. canis*.

(iii) A temperature of 38° C. inhibited growth, as is known to occur with *M. audouini*; colonies of *M. canis* continued to grow at this temperature (Giblett and Henry, 1950).



FIG. 2.



FIG. 3.



FIG. 4.

FIGS. 2, 3 and 4.—Same as Fig. 1. $\times 720$.

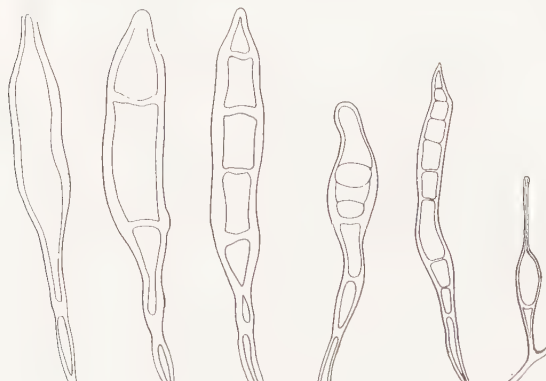


FIG. 5.—Schematic drawing of some of the types of macroconidia produced by the atypical strain.

The possibility remained that the formation of macroconidia by this strain might be due to the presence in the media of organic substances which, it is believed, may induce macroconidium-formation in typical strains of *M. audouini* (Benedek, 1937; Hazen, 1947). For this reason the fungus was grown in a fluid medium containing only mineral salts, ammonium chloride and pure dextrose: macroconidia were again produced after three weeks' culture.



FIG. 6. Giant culture of the atypical strain of *Microsporum audouini* on beer-wort agar.

Three guinea-pigs were inoculated with cultures of the atypical strain. Two control groups, each of three guinea-pigs, were inoculated with three different but typical strains of *M. audouini* and with three strains of *M. canis* respectively. Bloch's technique (1908) was employed; the flank of each guinea-pig was shorn and abraded with glass-paper; the prepared sites were then rubbed with pieces of agar cultures of the fungi. In all nine animals infection of the skin and hair resulted. The appearances in the animals inoculated with the atypical fungus and the normal strains of *M. audouini* were identical. Erythema appeared ten days after inoculation and was followed by the development of circinate areas of scaling (Figs. 7 and 8). Fluorescence of the hair stumps was detected fourteen days after inoculation and persisted for up to three months. The infection produced a moderate degree of sensitivity to

trichophytin in the two groups. In the animals infected with *M. canis* redness of the skin was apparent within seven days of inoculation and soon became

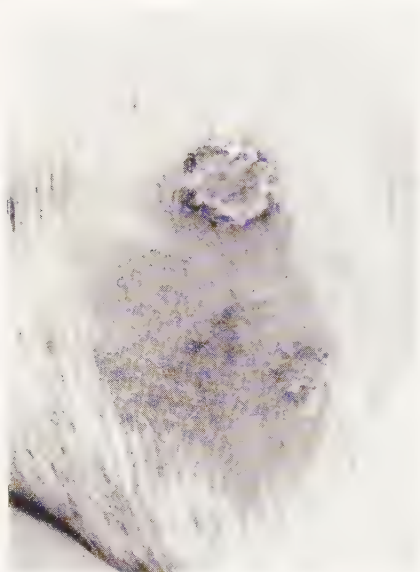


FIG. 7.—Guinea-pig 14 days after inoculation with the atypical strain of *Microsporium audouinii*.



FIG. 8. Same as Fig. 7, 42 days after inoculation.

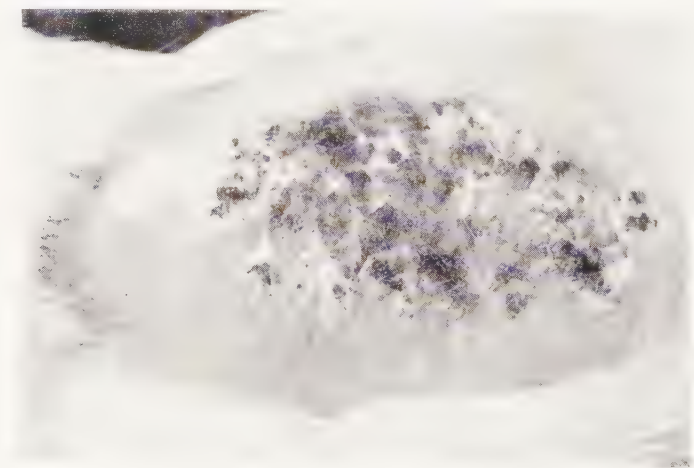


FIG. 9.—Guinea-pig 14 days after inoculation with *Microsporium canis*.

pronounced, with marked swelling and exudation at the sites of inoculation. This was followed by the formation of a heavy crust (Fig. 9), in which the infected hairs became matted. The crust was shed, carrying with it the infected

hairs and leading to a complete cure within a month of inoculation. This group of animals showed a greater degree of sensitivity to trichophylin than the others. In every animal mycelium was seen in the scales and hair. The latter showed invasion of the shaft with only slight spore-sheath formation in a few instances (Figs. 10 and 11). In each case the causative fungus was recovered by culture from the scales and hair.

Subsequent attempts to infect other breeds of guinea-pig with the atypical strain of fungus have failed.



FIG. 10.—Guinea-pig hair infected with the atypical strain, unstained and mounted in xylol. $\times 280$.

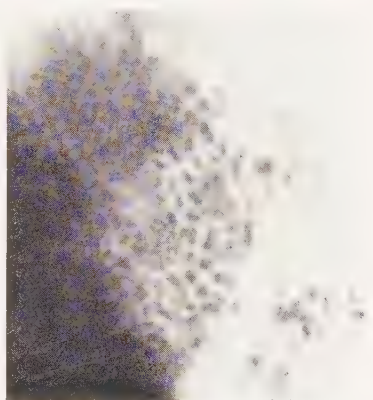


FIG. 11.—Portion of a spore sheath from a guinea-pig hair infected with the atypical strain. $\times 720$.

DISCUSSION.

The fungus appears to be a strain of *M. audouini* with the capacity to form numerous macroconidia. This feature is unusual (Bodin, 1900; Sabouraud, 1910; Plaut and Grütz, 1928; Emmons, 1934; Conant, 1937). Craik's (1921) description of a *Microsporum* producing macroconidia is inadequate, and it is uncertain whether he was dealing with *M. audouini*; Dodge (1935) lists a *M. audouini* var. *macrosporum*, but the groups it with *M. canis*. Scully and Kligman (1951) reported the recovery from a capuchin monkey of a fungus morphologically resembling *M. audouini*, but which produced numerous well-formed macroconidia.

No unusual pathogenic properties can be claimed for the author's atypical strain. The success of the animal inoculations seemed to be due to the sus-

ceptibility of the first strain of guinea-pigs to *M. audouini* infection. The experimental infection of animals with *M. audouini* is very exceptional, but the possibility of variation in the susceptibility of the hosts has not been sufficiently stressed (Bloch, 1908; Pasini, 1908; Sabouraud, 1910; Fuhs, 1923; DeLamater and Benham, 1938). The clinical picture in the child was of an unexceptional *M. audouini* infection, though *M. canis* occasionally produces a mild, non-inflammatory lesion (Livingood and Pillsbury, 1941). The appearances produced were identical with those produced by typical examples of *M. audouini*.

Although only small numbers of animals were used, the experiment suggests that there is no direct relationship between the ability of microsporum species to produce macroconidia and their pathogenicity. This conforms with the observation that pleomorphic cultures of *M. canis* which have completely lost their capacity to form macroconidia retain their pathogenicity for animals (Langeron and Talice, 1930).

SUMMARY.

1. A strain of *Microsporum audouini* producing numerous macroconidia on culture is described.
2. Macroconidia were formed both in cultures on the standard Sabouraud-type agar media and in a vitamin-free liquid medium.
3. The ability to form macroconidia was not associated with any unusual pathogenic properties.
4. Experimental infection of the guinea-pig with *Microsporum audouini* is reported.

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OBITUARY.

DR. WALTER FREUDENTHAL.

It is with deep regret that we record the sudden death on 27 March of Dr. Freudenthal at the early age of 58. He had been working happily in his laboratory the same morning.

He began his medical studies in 1913 at Geneva, but they were interrupted by the war. He resumed them at Breslau, his home town, qualifying in 1920.

From then until 1933 he was full-time assistant at Breslau University Dermatological Clinic, under Professor J. Jadassohn, receiving his M.D. in 1922, and becoming *Privat-dozent* in 1929.

In 1933, for political reasons, he left Germany for England, which he had long admired. He did not attempt to obtain an English qualification, as he was averse to competing with his English hosts, and sought to contribute all he could from his own corner. He was enabled to pursue his specialty of histopathology of the skin in the Dermatological Department of University College Hospital Medical School.

His influence was soon felt, especially at the meetings of the Dermatological Section of the Royal Society of Medicine, where his assured technique in demonstrating sections on the screen, his knowledge of the literature and his well-considered opinions were of an impressive standard.

During the war he gave valuable assistance in the out-patient department of the hospital.

In October 1945 he became the first holder of the Readership in Dermatological Histology in the University of London, and the next few years were the zenith of his career, when established dermatologists from home and abroad came to learn from him, and he held post-graduate classes for the many recruits to dermatology.

But in 1947 his fatal illness began and his capacity for sustained work steadily contracted; he continued, however, to give all he could in spite of constant severe headache.

Freudenthal gained a secure international reputation by his numerous scholarly papers, which advanced our knowledge at many points. Perhaps his chief contributions were his classic chapters in Jadassohn's *Handbuch* on "Pseudoxanthoma Elasticum," and "Warts and Condylomata" (with Rudolph Spitzer), and his papers on Circumscribed Myxoedema, Verruca Senilis and Keratoma Senile, Glomus Tumour, Mucin in Granuloma Annulare, Amyloid in the Skin, and Dermatomyositis and Scleroderma. He also wrote, with Dr. H. Haber, a useful chapter on "Skin Biopsy" in *Recent Advances in Clinical Pathology*.

He was intellectually modest, revered the great men of the past, especially his much loved teacher, Jadassohn, and instilled into his pupils the presumptuousness of coming forward with a case at a clinical meeting or offering a paper for publication without being thoroughly familiar with the literature of the subject.

To the writer he was a very kind and unswervingly loyal friend and is greatly missed.

To his widow, who helped him so unfailingly, we offer our deep sympathy in her bereavement.

W. N. G.

BOOK REVIEWS.

MANUAL OF LEPROSY.*

THE book was reviewed in this Journal (60, 386). Since then treatment with sulphetrones has advanced so much that a supplement has been issued to bring the section on treatment up to date. DDS and its derivatives, the modes of administering them and the reactions that may occur are considered. There are also paragraphs on treatment with streptomycin, thiosemicarbazone and BCG. G. W. B.

UNTOWARD REACTIONS OF CORTISONE AND ACTH.†

KNOWLEDGE of the actions of Cortisone and ACTH is still so recent and incomplete that before any book on the subject can be published it may be out of date. This small book gives a useful and up to the minute summary of the literature on the undesirable changes produced by these substances.

The physiology of the hormones is compressed into three pages, a diagram and a table, a feat which leaves the reader with mental indigestion. However, the remainder of the book, divided into sections on the effects of Cortisone and ACTH on the various systems of the body, is easy to read. Each section is headed by a clear and concise résumé, which adds considerably to its value as a quick reference book.

In the chapter on treatment, careful selection of patients is stressed as the important step to be taken to cut down untoward reactions and the methods which reverse the common undesirable biochemical changes are outlined. A useful bibliography of some 100 references is included.

The book should prove of considerable value as a guide to those who are not primarily engaged on work in this field, but are called upon to use these powerful but potentially harmful therapeutic agents. I. B. S.

* *Supplement to Manual of Leprosy.* By ERNEST MUIR, C.M.G., C.I.E., M.D., F.R.C.S.Ed. Edinburgh: E. & S. Livingstone Ltd., 1952. Pp. 16. Price 2s. 6d.

† *Untoward Reactions of Cortisone and ACTH.* By VINCENT J. DERBES and THOMAS E. WEISS. Oxford: Blackwell Scientific Publications. Pp. 51. Price 8s. 6d. net.

CURRENT LITERATURE.

INFECTIVE DERMO-EPIDERMITIS AS AN OCCUPATIONAL DISORDER. JOSÉ CARRERA.
(1951) *Arch. argent. Dermatologia*, **1**, 17.

More than 19% of 1679 male dermatological patients suffered from this affection. Many of them were exposed to conditions favouring an onset of occupational dermatitis, but they came to hospital, not with the classical signs of contact dermatitis, but with an infective dermo-epidermitis which often relapsed on returning to work. These lesions persisted longer than the usual ones of contact dermatitis, they tended to get larger and had a sharply defined margin with a fine peripheral epithelial frill. They did not respond to and were sometimes exacerbated by topical agents used for contact dermatitis, but cleared rapidly under local antiseptics. When chemical irritants had set up the rash it was acutely inflamed in the early stages and then settled down to the infective phase.

The author usually begins treatment with baths of potassium permanganate 1/10,000 and dilute aqueous solutions of basic fuchsin or methylene blue for a few days, and then changes to applications of calomel 1% first in Lin. calcii hydrox. and then in creams. Tar is added to the cream in the last stage. Patients get more relief from irritation if the local application is spread on old linen and closely fitted to the affected areas.

G. W. B.

LOCAL USE OF MEDIUM FATTY ACIDS ALONG WITH VITAMIN A. G. WEITZEL and O. NAST.
(1951) *Derm. Wschr.*, **124**, 1025.

Investigations were carried out with a very well mixed glyceride containing about equal proportions of natural fatty acids containing 8, 10 and 12 carbon atoms, but no undecylenic acid (C_{11}), and as little acid triglyceride as possible, so as to obtain a lower melting-point and a thin oily consistency. The resulting oil was found to be rapidly absorbed in scaly and hyperkeratotic skins, which became smooth after several days' use. Vitamin A which was added in a strength of 400,000 international units to 100 c.c. of oil was found to dissolve excellently and was exposed to no risk of oxidation. Only after six months was a loss of 10% in vitamin A content detectable. The preparation is applied thrice daily, and practically disappears from the surface of the skin in 10-15 minutes. A normal dose is 10 c.c. daily—40,000 u., a somewhat smaller dose than that usually given by other means. Psoriasis was found to benefit (30 c.c. locally daily), with oral vitamin A also in some cases, and minor skin defects as in radiodermatitis yielded rapidly. Seborrhoeic conditions, e.g., rosacea, acne, and the seborrhoeic type of psoriasis, folliculitis and axillary abscesses appeared to benefit along with other measures. Itching, when present, seemed to yield to the vitamin A therapy, e.g., in psoriasis, neurodermatitis and eczema.

M. S. S.

THE ACTION OF HYALURONIDASE ON THE VASCULAR SYSTEM. G. W. KORTING and F. AICHINGER. (1951) *Derm. Wschr.*, **124**, 1176.

The author sought to find whether the vasodilator effect of hyaluronidase was demonstrable in man in therapeutic doses given subcutaneously; 10 Schering units of "Kinetin" in 1-5 c.c. of normal saline were injected $\frac{1}{2}$ cm. below the skin surface of the forearm, with normal saline as the control in 16 subjects. Almost uniformly there was a local rise in temperature, absent in the control following a temporary fall for 3-5 min. owing to the coolness of the solution. The average increase after 10 min. was 0.8° C., after 15 min. 1.0° C. and after 20 min. 0.9° C. The greatest increase was 3.7° C. Electrodermatometry of the fluid volume showed a negative difference in the first 10 minutes followed by a positive difference after 10-25 minutes, not so marked as with thermometry. The vascular reaction to the hyaluronidase is limited to the immediate neighbourhood. A photograph clearly demonstrates the dilatation of the vessels observed by transmitted light in the ear of a rabbit following the injection of hyaluronidase.

M. S. S.

UNUSUAL CHANGES IN SYRINGOMAS. G. K. STEIGLEDER. (1951) *Derm. Wschr.*, **124**, 1049.

The author, after discussing the literature on the subject, describes the clinical appearances and histology in six patients; the appearances are not against an apocrine origin. In his opinion

if syringoma develops from primary epithelial germs from which sebaceous glands, apocrine glands, other sweat glands and hair bulbs may develop it is understandable how the syringoma picture may vary. He examined two cases for glycogen and failed to find it, but believes it may be found in some cases. In one case he came across structure reminiscent of a sebaceous gland. In all instances the surrounding collagen bundles were thick and homogeneous and there were changes in the elastic tissue with thickening and clumping changes in the connective tissue analogous to elastosis colloidalis. Sometimes the blood and lymph channels were dilated. In all cases there was some degree of follicular hyperkeratosis and in one an overlying senile wart.

M. S. S.

FRAGMENT ON THE HISTORY OF SCABIES IN THE FIRST HALF OF THE NINETEENTH CENTURY. W. SCHÖNFELD. (1951) *Derm. Wschr.*, 124, 1147.

It had already been shown in the German literature before Hèbra that scabies was due to a special mite and was not a constitutional disease; also that an infection in the human or animal scabies from the dog, horse or cat was easier to treat than scabies due to the usual mite.

M. S. S.

SANDPAPER TREATMENT OF PIGMENTED NAEVI. R. BAUMANN and E. HEINKE. (1951) *Derm. Wschr.*, 124, 1180.

The authors followed the technique recommended by H. Foerster for removing pigmented naevi with sandpaper. Of 14 patients, 2 were treated successfully and the others unsuccessfully. Clinical photographs show the temporary improvement followed by recurrence, and a photomicrograph groups of pigment cells in spite of several intensive treatments with sandpaper.

M. S. S.

IN VIEW OF THE ANTICOAGULANT IS THE TREATMENT OF PHLEBITIS BY COMPRESSION BANDAGES (H. FISCHER) STILL JUSTIFIABLE? B. LINDNER. (1951) *Derm. Wschr.*, 124, 1169.

The zinc plaster treatment of thrombophlebitis introduced by Fischer in 1910 marked a great advance on previous treatment by strict bed rest, shortening the duration to 1-2 weeks. The leg muscles act as a "peripheral heart" against the great hydrostatic pressure in the lower limbs, and a frequent cause of thrombosis is confinement to bed of operation cases with no occasion to use the leg muscles; according to Castleman 95% of all emboli arise from the calf veins. One advantage of the pressure bandage is that, should thrombosis occur, it helps to keep the thrombus in position and allows of more rapid organization. Correct technique in applying the bandage is very important. Fischer and his followers have treated many thousand cases by pressure bandage without the occurrence of emboli. The author reports on 22 patients treated by himself with compression bandages. He describes his technique in detail: two diagrams accompany the text, and three charts demonstrate the rapid decrease in venous pain, in swelling, in the heightened prothrombin index to normal and in Payr's sign. All patients were suffering from acute phlebitis, or in one case from an acute exacerbation of a chronic phlebitis, and all were objectively and subjectively symptom-free in 5 days at the latest; the average duration of treatment was 8½ days; if not ambulatory, bed exercises were given. As the bandages were effective only if firm pressure was constantly sustained they had to be changed daily, requiring perhaps 40 minutes for a careful thigh and leg bandage where necessary. The anticoagulants would take less time, but are not without danger, and more experience of their use is necessary before a judgment can be made.

M. S. S.

TREATMENT OF ACNE VULGARIS WITH ADRENAL CORTEX HORMONE (DOCA). W. KÜHNAU. (1951) *Derm. Wschr.*, 124, 1146.

In the past three years the author has treated acne vulgaris in either sex and at any age with Doca 10 mg. twice weekly, intramuscularly. Comedones, pustules and abscesses disappear in the first three weeks, and practically always the acne is healed in four to six weeks whether local treatment is given or not. The association of acne with the halogens was one argument in favour of using the mineral corticoid. That acne develops following overdosage of rheumatism with cortisone may be explained by the dualism of adrenal cortex containing mineral corticoid (Doca) and gluco-corticoid (Cortisone). Acne may, as it were, represent the opposite pole to rheumatism in derangement of hormonal balance.

M. S. S.

HISTOLOGICAL INVESTIGATIONS ON INTRACELLULAR PEROXIDIZING SUBSTANCES IN HUMAN SKIN UNDER NORMAL AND PATHOLOGICAL CONDITIONS. H. HERMANN. (1951) *Derm. Wschr.*, 124, 1241.

Using the benzidine reaction it appears that in normal human skin the content of peroxidizing substances increases from the basal layer to the stratum lucidum, being highest in granular cells. Cellular nuclei give a negative benzidine reaction, and pigment-bearing cells contain no oxidase. In carcinoma the content varies. Around cell-nests it corresponds to that in the superficial layers of the skin. There is no departure from the normal content in tuberculosis cutis verrucosa, mycosis fungoides and common warts. At the margin of a leg ulcer and chronic vegetating pyoderma the reaction is negative.

M. S. S.

FUSED BENTONITE SULPHUR AS A TOPICAL MEDICATION. THOMAS H. STERNBERG and DAVID R. TAYLOR. (1951) *Urol. cutan. Rev.*, 55, 348.

Topical application of micronized fused bentonite sulphur was based on 194 patients with various skin lesions. The substance occasionally irritated the skin. The impression was that it is a valuable therapeutic adjuvant in acne vulgaris, seborrhoeic dermatitis and dermatophytosis of the feet and hands, and that further trials are indicated.

C. H. W.

DERMATITIS HERPETIFORMIS ASSOCIATED WITH VISCERAL MALIGNANCY. NORMAN TOBIAS. (1951) *Urol. cutan. Rev.*, 55, 352.

Dermatitis herpetiformis lesions hitherto refractory to all treatment cleared after an ovarian carcinoma was found and removed: ? post or propter hoc.

C. H. W.

PSORIASIS AND ITS TREATMENT. CHARLES S. LINCOLN, Jr. (1951) *Urol. cutan. Rev.*, 55, 407.

A discussion of the more useful methods of treatment, with arguments in favour of low fat diet. Cure of psoriasis is infrequent, but the patient should be assured that much can be done to improve his rash, and that remissions are common.

C. H. W.

CONTACT DERMATITIS, NUMMULAR ECZEMA, POMPHOLYX: THE MOST COMMON DERMATOSES OF THE HANDS, THEIR DIAGNOSIS, DIFFERENTIAL DIAGNOSIS AND SPECIFIC TREATMENT. TIBOR BENEDEK. (1951) *Urol. cutan. Rev.*, 55, 410.

The title is inviting, and the presentation of the author's arguments intriguing. The description of the diagnostic features of these three common disorders is good. The author sharply differentiates pompholyx from eczematous contact dermatitis by its site (palmar and volar surfaces), its vesication without an erythematous base, and its sudden spontaneous eruption unrelated to any external contact irritant. Long ago (1927) he claimed that pompholyx was due to a bacteraemia (*Bact. endoparasiticus* Benedek) of unknown origin, and has since produced "cures" by using a vaccine. He now finds that nummular eczema is a skin manifestation of vitamin A deficiency, which can be corrected by giving 100,000 units of the vitamin concentrate in oil by intramuscular injection twice weekly. Prolonged oral therapy (3-6 months) is useless, whereas intramuscular injections yield results in "three to four weeks." No blood vitamin levels are quoted, nor are psychological or other factors mentioned. Like the endoparasitic theory of pompholyx, it sounds too good to be true. We shall soon know.

C. H. W.

MYCOSIS FUNGOIDES. A. LEINBROCK. (1951) *Arch. Derm. Syph., Berl.*, 192, 385.

A 36-year-old male suffering from mycosis fungoides received urethane and was investigated over the last three months of his life. The many studies made at intervals are illustrated by graphs and tables: serum protein values were determined micro-electrophoretically, and by heat coagulation and turbidity techniques; the quantitative Takata reaction, blood sedimentation rates, and red- and white-cell counts are tabulated.

Values for α_1 , α_2 , β - and γ -globulins and albumins showed evidence of a progressive dys- and hypo-proteinaemia. This result was not, however, specific for mycosis fungoides.

M. F.

CHOLESTEROL DETERMINATION IN SKIN FAT. H. LÄNCKE and K. KLÄUFL. (1951) *Arch. Derm. Syph., Berl.*, 192, 402.

This paper is about techniques for the quantitative determination of cholesterol and its esters in the skin. Gravimetric and nephelometric methods are discussed, but the author chose a

colorimetric technique, using the Liebermann-Burchard reaction and the Coleman—universal—spectrophotometer. He checked his results by comparing absorption curves of skin fat solutions with those of standard cholesterol, and found that there were components other than squalene that were interfering with the reaction. M. F.

PSEUDO-MUCOID AND MUCOID CHANGES IN THE NEIGHBOURHOOD OF SWEAT GLANDS, SWEAT GLAND CYSTS AND SWEAT GLAND TUMOURS. W. NIKOŁOWSKI and E. GOTTRON. (1951) *Arch. Derm. Syph., Berl.*, **192**, 439.

Transudation of sweat into the connective tissue is believed to be responsible for the histological changes noted. M. F.

THE SANARELLI-SHWARTZMANN PHENOMENON AS AN EXPLANATION OF UNCERTAIN ULCERATIVE PROCESSES OF THE SKIN. L. PFLEGER and S. TAPPEINER. (1951) *Arch. Derm. Syph., Berl.*, **192**, 516.

Necrotizing ulcers observed during the illness of two pemphigus patients and one with arsenical exfoliative dermatitis could not be accounted for by the specific skin disease of the patients nor were there pressure sores. A Sanarelli-Shwartzmann phenomenon, predisposed to by the cachectic state of the patients, was postulated. M. F.

CHANGES OF ELECTROPHORETIC PROTEIN SPECTRA IN SERUM AND BLISTER-FLUID IN DIFFERENT FORMS OF PEMPHIGUS. A. LEINBROCK. (1951) *Arch. Derm. Syph., Berl.*, **192**, 535.

The following investigations were made on patients with various forms of pemphigus: (1) Total protein estimations. (2) Microelectrophoretic separation into α_2 -, β - and γ -globulin fractions. (3) Heat-coagulation methods utilizing turbidity and the nephelogram. (4) Quantitative Takata reaction. (5) Cadmium sulphate reaction. (6) Blood sedimentation rates. The dysproteinaemia discovered is evaluated in terms of diagnosis, prognosis and therapeutics. M. F.

SULFOXONE SODIUM (DIASONE) IN THE TREATMENT OF LEPROSY: A SUMMARY ANALYSIS OF FIELD REPORTS. EUGENE R. KELLERSBERGER. (1951) *Internat. J. Leprosy*, **19**, 265.

An analysis of 22 reports made to the American Leprosy Missions, Inc., by institutions in various parts of the world showed that of 1430 cases treated, 74.8% improved clinically, 18.8% remained unchanged, 5.2% grew worse, and 1.2% died. Of the 17 reported deaths at least three were probably ascribable to the drug. H. T. H. W.

CONTRIBUTION TO THE STUDY OF THE SEROLOGY OF LEPROSY. N. O. CASTRO and A. A. BONATTI. (1951) *Internat. J. Leprosy*, **19**, 309.

A lipid extract of leproma tissues is used as the antigen of micro-flocculation and complement-fixation tests in the diagnosis of leprosy. Two techniques are described, the former qualitative and the latter quantitative or dosimetric. H. T. H. W.

ETIOLOGICAL AND IMMUNOLOGICAL CONCEPTS REGARDING SARCOIDOSIS. ADOLPH ROSTENBERG, JR. (1951) *Arch. Derm. Syph., Chicago*, **64**, 385.

This article is for the most part a long argument, with many references to the literature, that the tubercle bacillus is unlikely to be the cause of sarcoidosis. The failure of many patients with sarcoidosis to react to tuberculin is explained by the "reticulo-endothelial blockade" produced in this disease. Such a condition impairs the ability of the organism to react to antigens. It is suggested that the cause of sarcoidosis is a hitherto unrecognized infectious agent. J. K.

EVALUATION OF A NEW DRUG FOR TOPICAL THERAPY OF TINEA CAPITIS. EDMOND EDELSON, CHARLES CRASTER and AARON HASKIN. (1951) *Arch. Derm. Syph., Chicago*, **64**, 444.

Asterol (2-dimethylamino-6-(beta-diethylaminoethoxyl)-benzothiazol) dihydrochloride was used in the local treatment of 72 cases of *M. audouini* infection of the scalp. It was sprayed on morning and afternoon as a 5% tincture, and in the evening after washing a 5% ointment was applied plentifully and massaged into the scalp with a soft toothbrush.

The results were that 66.6% showed no fluorescence under Wood's light after 9—19 weeks'

treatment, 23.7% showed various degrees of improvement after 7-17 weeks, and 9.7% were unimproved after five weeks. In 16.7% a follicular reaction developed, and in 2.8% a contact dermatitis.

J. K.

CUTANEOUS HYPERSENSITIVITY DUE TO BERYLLIUM: A STUDY OF 13 CASES. GEORGE H. CURTIS. (1951) *Arch. Derm. Syph., Chicago*, **64**, 470.

Skin and mucous membrane symptoms are occupational hazards of workers in beryllium extraction factories. The former are due to contact dermatitis and ulcers resembling "chrome ulcers" and the latter to tracheo-bronchitis, pneumonitis, rhinitis and conjunctivitis. Notes on 13 cases of contact dermatitis are given; beryllium fluoride was the most potent sensitizer of the salts encountered; the metal, being insoluble, is apparently unable to cause sensitization by itself. The incubation period of the dermatitis varied from 7 to 14 days. Lesions cleared on withdrawal of the patient from contact with beryllium salts, but recurred on re-exposure.

J. K.

THE PRESENT SITUATION OF TISSUE THERAPY IN DERMATOLOGY. J. GATÉ and R. VACHON. (1951) *Ann. Derm. Syph.*, **78**, 545.

Living tissue when placed in an unfavourable medium produces substances called biogenic stimulins. Injection of these into patients stimulates the whole organism. Such bodies, prepared chiefly from placenta, were used in a variety of conditions, including psoriasis, ulcers of the leg, necrotic capillaritis, etc. A proportion of these conditions improved. No controls are given.

F. F. H.

A DOZEN CASES OF DERMATITIS HERPETIFORMIS. J. WATRIN and P. JEANDIDIER. (1951) *Ann. Derm. Syph.*, **78**, 551.

Histories and clinical observations are presented but the exact criteria of diagnosis are not given, though some cases were confirmed histologically. Four of the patients were over 65; only one case apparently cleared and four patients died; in three there was probably cancer and in five cases there was an associated eczema. The aetiology is probably allergic, possibly due to toxins from visceral cancer or other foci. They suggest the disease may be one grade of allergic reaction between the eczematides where the degree is low, and vesicular oedematous erythroderma where the degree is high.

F. F. H.

ROENTGEN THERAPY IN ACNE. G. M. CRAWFORD, R. H. LEUKART and R. F. TILLEY. (1951) *New Engl. J. Med.*, **245**, 726.

Fifty-eight patients who had received X-ray treatment for acne five to twenty-five years previously were re-examined. In none was radio-dermatitis detected. The results suggest that the best effect is obtained when 1000-1200 r is given in an uninterrupted series of treatments.

A. D. P.

MICROSPOROSIS OF THE SCALP: EVALUATION OF A NEW THERAPEUTIC AGENT. B. APPEL, M. J. TYE, W. HALFERN and D. PACI. (1951) *New Engl. J. Med.*, **245**, 1003.

Sixty-one children suffering from tinea capitis, some of whom were infected with *M. audouinii* and some with *M. canis*, were treated with asterol dihydrochloride (2-dimethylamino-6-(beta-diethylaminethoxy)-benzothiazole-dihydrochloride) in a 2% ointment or tincture of the same strength.

Three months' treatment did not cure, but longer periods cured 5 of 6 cases infected with *M. canis* and 5 of 24 infected with *M. audouinii*.

A. D. P.

"CHEMICAL" ANALYSIS OF THE INTACT SKIN BY REFLECTANCE SPECTROPHOTOMETRY. JOSEPH W. GOLDZIEHER, IRENE S. ROBERTS, WILLIAM B. RAWLS and MAX A. GOLDZIEHER. (1951) *Arch. Derm. Syph.*, *Chicago*, **64**, 533.

The authors have developed a somewhat elaborate and costly apparatus to analyse the spectrum obtained by reflection of visible and ultra-violet light from the skin. They confirm the existence of absorption bands due to oxyhaemoglobin, reduced haemoglobin, carotene and melanin. In exploring the ultra-violet spectrum they identified bands due to keratin, and showed that the depth of the bands varied with the amount of keratin present. They suggest that this method may be useful in determining the presence and possibly the concentration of many other normal and abnormal substances (such as heavy metals and drugs) in the skin.

J. K.

CORTISONE AND CORTICOTROPIN (ACTH) IN TREATMENT OF SCLERODERMA. ROBERT R. KIERLAND and EDGAR A. HINES, Jr. (1951) *Arch. Derm. Syph., Chicago*, **64**, 549.

Four cases of generalized scleroderma improved with cortisone given in doses of 50 to 100 mg. daily. One patient had a remission for at least five months; the others relapsed soon after ceasing treatment, but with further courses improved in a shorter time and with a smaller total dosage than in the first instance.

ACTH had no effect on two patients; perhaps the dosage (80 and 75 mg. daily respectively) or the frequency of administration (twice daily) was inadequate. J. K.

EVALUATION OF CHLORAMPHENICOL IN THE TREATMENT OF CHRONIC DISCOID LUPUS ERYTHEMATOSUS. HARRY M. ROBINSON. (1951) *Arch. Derm. Syph., Chicago*, **64**, 565.

Of 16 patients so treated 6 cleared and the lesions have not recurred, 4 showed moderate to great improvement, 3 improved but later regressed and did not then respond to chloramphenicol, gold or bismuth, 1 was unchanged, and 2 changed to the acute disseminated type and died.

J. K.

CORTISONE ACETATE ADMINISTERED ORALLY IN DERMATOLOGICAL THERAPY. MARION B. SULZBERGER, VICTOR H. WITTEN and STANLEY N. YAFFE. (1951) *Arch. Derm. Syph., Chicago*, **64**, 573.

Cortisone acetate in solution or tablets was given to 32 patients suffering from a variety of dermatoses for a variety of reasons. The starting dose was 100 to 200 mg. daily, but was reduced as soon as possible to the lowest effective dose. Response was rapid and satisfactory in many cases: unwanted effects such as moon facies and hirsutism were noted in five cases. The authors are fortunate to have cortisone available for such diseases as warts (which were not affected), and for such reasons as "to help a patient meet an 'emergency' such as a wedding or debut party," but it appears obvious that oral therapy is effective in suitable cases and diseases.

J. K.

DERMATOLOGICAL PROBLEMS AMONG PHARMACEUTICAL WORKERS. JOHN ERIC DALTON and JAMES D. PEIRCE. (1951) *Arch. Derm. Syph., Chicago*, **64**, 667.

The incidence of occupational dermatoses among workers in a leading drug factory was found to be unexpectedly low, causing 1.2% of 126,129 attendances at the factory dispensary. Applicants for employment had been carefully screened by a thorough medical examination, including, in the case of highly technical personnel, prophetic patch tests. Patch tests were done on 322 patients with 43 positive reactions: 28 to penicillin, 9 to thiamine hydrochloride, 2 to mercury salts, 2 to barbiturates, 1 each to acetylsalicylic acid and streptomycin. It would have been interesting to learn what drugs the firm manufactures and the number of workers employed in producing each.

J. K.

TREATMENT OF LUPUS VULGARIS BY INTRALESIONAL INJECTIONS OF CALCIFEROL. BRIAN RUSSELL. (1951) *Arch. Derm. Syph., Chicago*, **64**, 676.

High potency ostelin in ethyl oleate, 300,000 i.u. per ml., was used to treat 9 cases of lupus vulgaris by injection into the lesions at intervals of two to three weeks. Clinical clearance occurred in 6 cases (1 relapsed but cleared again after further injections), 2 were greatly improved, and 1 was resistant. This treatment is indicated for small localized lesions, refractory lesions, recurrent localized nodules, patients intolerant to systemic calciferol and patients with pulmonary tuberculosis, cardiovascular disease, renal disease and in pregnancy.

J. K.

SULPHOXONE (DIASONE) SODIUM FOR DERMATITIS HERPETIFORMIS. THEODORE CORNBLEET. (1951) *Arch. Derm. Syph., Chicago*, **64**, 684.

This is another suggestion for the control (but not cure) of a troublesome disease. The drug was given to 13 patients in 0.3 g. tablets, starting with 1 a day and working up to 3 or 4; the longest time treatment was continued was 2½ years. All showed great improvement or complete remission while taking the drug. The commonest side-effect was a transient anaemia, and cyanosis due to methaemoglobinaemia occurred in about half the patients. Nausea, haematuria, leucopenia and drug rashes may also occur, but no patient in this series had to give up treatment.

J. K.

EFFECT OF "AMINOPTERIN" ON EPITHELIAL TISSUES. RICHARD GUBNER. (1951) *Arch. Derm. Syph., Chicago*, 64, 688.

Aminopterin (4-aminopteroyl glutamic acid) is a potent inhibitor of connective-tissue proliferation; its action lies in inhibition of the action of folic acid in the regulation of protein synthesis. It has thus a somewhat different effect from cortisone. Its action on epithelial structures is even more striking; it interferes with wound healing and epithelialization and produces atrophy and ulceration of the mucosa and alopecia.

A series of 18 dermatological patients was treated with 1.5-2 mg. daily for varying periods; 13 suffered from psoriasis, 2 from scleroderma, and 1 each from chronic atopic dermatitis, seborrhoeic dermatitis and chronic discoid L.E. In all patients remission occurred, which persisted from two weeks to several months. Recurrences responded to further treatment. After administration of 14-28 mg. treatment had to be interrupted in most cases because of the occurrence of shallow ulceration of the buccal mucosa and frequent abdominal cramps. Compared with cortisone improvement in psoriasis was more marked and more sustained, but concomitant arthritis was less affected. J. K.

PEMPHIGUS: A HISTOPATHOLOGICAL STUDY. WALTER F. LEVER. (1951) *Arch. Derm. Syph., Chicago*, 64, 727.

This is an enlightening article on American views on the classification of "pemphigus." Because of recent reports in European literature on the histology of pemphigus the author reviewed all histological sections from cases of pemphigus seen at the Massachusetts General Hospital since 1936, a total of 65 patients. At this hospital pemphigus is classified as pemphigus vulgaris acutus, pemphigus vulgaris chronicus, pemphigus vegetans, pemphigus foliaceus, pemphigus erythematosus (Senear-Usher syndrome) or benign mucous membrane pemphigus.

Details of the histology of these six types are given. Pemphigus vulgaris acutus corresponds to what is known in Europe as pemphigus vulgaris, pemphigus vulgaris chronicus to dermatitis herpetiformis, and the author concludes that European authors "regard pemphigus vulgaris chronicus as a bullous variant of dermatitis herpetiformis." Pemphigus vegetans is regarded as a variant of pemphigus vulgaris acutus. Pemphigus foliaceus and pemphigus erythematosus have the same histological picture, the latter is regarded as an abortive form of the former. Benign mucous membrane pemphigus histologically resembles pemphigus vulgaris chronicus.

The one case of familial benign pemphigus seen had a similar histological picture to that of pemphigus vulgaris acutus but ran a benign course. Acute febrile (butchers') pemphigus is considered to be identical with severe erythema multiforme. J. K.

BEHAVIOUR OF ALLERGIC SKIN REACTIONS AFTER ACTH THERAPY. H. HANTHAUSEN. (1951) *Acta allergol.*, 4, 305.

Experiments on human subjects and guinea-pigs showed that in the usual therapeutic doses ACTH did not influence urticarial or allergic eczematous reactions. H. T. H. W.

THE EFFECTS OF APPLICATIONS OF VARIOUS SUBSTANCES ON THE EPIDERMIS OF THE RAT. E. O. BUTCHER. (1951) *J. invest. Derm.*, 16, 85.

216 22-day-old rats were shaved and had applied to their skins for periods ranging from 5 days to 2 weeks such materials as 10% acetic acid, castor oil, chloroform, mineral oil, xylene, oleic acid, olive oil, and 10% cholesterol in olive oil. Xylene produced a hypertrophy of the entire epidermis followed by desquamation. Oleic acid and to a less extent olive oil, sodium oleate and potassium oleate appeared to cause acceleration of growth and parakeratosis. The potassium soap of ricinoleic acid, stearic acid, castor oil, mineral oil, chloroform and acetic acid had little effect; fat-fat none at all. The relationship of dandruff to the presence of fatty acids is discussed.

The photomicrographs illustrating this article do little or nothing to confirm the statements contained in it, however well they may recall the original sections to the memory of those who have actually seen them. J. H. T. D.

THE EFFECT OF X-RADIATION ON EXPERIMENTALLY PRODUCED SENSITIVITY. S. G. COHEN, L. D. MAYER and L. H. CRIEP. (1951) *J. invest. Derm.*, 16, 91.

On the supposition that the antibody concerned in the sensitization reaction of the skin to a specific irritant resides in the lymphocytes or lymphoid tissue, a dose of x-rays sufficient to cause disappearance of most of the lymphatic tissue could be expected to reduce the intensity of reactions in the sensitized animal.

The dose used in these experiments—175 r—proved neither to be lethal within 30 days to 50% nor by any means completely to destroy all the lymph-nodes, nor did it make any difference to the intradermal test for sensitivity. But of 19 sensitized guinea-pigs that had been irradiated 5 gave a fully positive patch test reaction, 11 an attenuated one and 3 were negative, whereas 14 out of 18 animals that had been sensitized but not irradiated gave positive reactions to the paraphenylenediamine applied to the skin.

J. H. T. D.

THE USE OF HYALURONIDASE BY IONTOPHORESIS IN THE TREATMENT OF GENERALIZED SCLERODERMA. R. J. POPKIN. (1951) *J. invest. Derm.*, 16, 97.

Evidence that the hyaluronidase penetrated the skin was given by the "increased disappearance time" of saline wheals. The author means perhaps reduced duration or increased rate of disappearance. The patients were improved transiently as regards their vascular symptoms and rather more lastingly in the softness and flexibility of the skin. The treatment consisted of an initial application to areas of 4 sq. cm. with 7 ma. for 10 mins. of a solution containing 900 T.R.U., gradually increased up to 26,000 T.R.U.

J. H. T. D.

THE OXIDATIVE INACTIVATION OF POISON-IVY ALLERGENS BY PEROXIDASE. I. W. SIZER. (1951) *J. invest. Derm.*, 16, 103.

Having already shown that poison ivy and related allergens are oxidized and their activity reduced in the presence of tyrosinase and laccase, the author describes experiments designed to show that the same thing is possible with peroxidase—an enzyme obtained from horse-radish. The source of oxygen in this case is hydrogen peroxide (which by itself is capable to some extent of oxidizing the allergens), and two of the methods depended on titration of residual peroxide. Another method depended on the production of coloured end-products and their spectroscopic assay and, finally, the attempt was made to assess the amount of allergen remaining in the solution by applying it to the skin.

J. H. T. D.

OBSERVATIONS IN BIOTIN. F. KALZ, V. A. KRAL and R. R. FORSEY. (1951) *J. invest. Derm.*, 16, 111.

Rats fed on egg-white develop dermatitis, alopecia and muscular incoordination because egg-white contains a globulin, "avidine," which inactivates biotin, a water-soluble component of the vitamin B complex. Biotin is also present, but without its antagonist avidine, in liver and yeast. At the time when the relief by liver and yeast of egg-white the damage was attributed to a protective factor, this hypothetical factor was called vitamin H. That alopecia, dermatitis, etc., were linked up with the story has naturally resulted in some wishful thinking and hopeful experiment. The authors of this paper however merely seek to show that biotin is antagonistic to the flushing action of nicotinic acid, and that it might possibly have an indication in the treatment of rosacea. As might be expected, the first few patients to be treated reacted well for the first few times.

J. H. T. D.

THE TREATMENT OF PARAPSORIASIS WITH VITAMIN D₂. O. CANIZARES, J. H. DWINELLE and H. SIATIN. (1951) *J. invest. Derm.*, 16, 121.

Vitamin D₂ appeared to cause the disappearance of lesions in 3 cases of guttate parapsoriasis and in one of parapsoriasis en plaques. In the last case the cure was confirmed by observation three months later. Two of the others had relapses which responded to further treatment.

J. H. T. D.

EXPERIMENTAL TREATMENT OF VERRUCA VULGARIS WITH LOCALLY INJECTED COLCHICINE. L. M. NELSON. (1951) *J. invest. Derm.*, 16, 123.

To have colchicine injected into warts is painful, and it gives results inferior to those of various dummy treatments.

J. H. T. D.

TREATMENT OF EXFOLIATIVE DERMATITIS WITH CORTISONE. BETTIE M. WEST. (1952) *Arch. Derm. Syph., Chicago*, 65, 56.

The author records 3 cases of severe exfoliative dermatitis secondary to contact dermatitis which cleared rapidly with cortisone. The dose was 100–200 mg. twice daily initially, the amount being gradually decreased as improvement occurred. Up to the time of writing all three patients had remained clear.

J. K.

LEPRA REACTION: ITS TREATMENT WITH DIHYDROSTREPTOMYCIN. BRAULIO SAENZ. (1952) *Arch. Derm. Syph., Chicago*, 65, 59.

Dihydrostreptomycin, usually 2 g. daily for 3 weeks, was given to 9 patients with lepra reaction ("lepra fever"). No benefit was seen in one patient, one relapsed but responded to a further course, the remaining 7 showed defervescence of fever, gain in weight and amelioration or disappearance of constitutional and local symptoms. No side effects were seen. The author considers it the best available drug for this reaction, and that in resting periods from sulphone therapy it is a valuable adjunct in lepromatous leprosy. J. K.

SERUM LIPOPROTEINS AND CHOLESTEROL METABOLISM IN XANTHELASMA. NORMAN N. EPSTEIN and RAY H. ROSENMAN. (1952) *Arch. Derm. Syph., Chicago*, 65, 70.

The authors carefully investigated 35 patients (12 men and 23 women) with this minor skin lesion. The investigation included particular attention to the possible presence of manifest arteriosclerosis, electro-cardiography, liver function tests and quantitative and qualitative analysis of fasting serum cholesterol concentration; details of the methods used are given. They found hypercholesteremia in 47% and advanced coronary artery disease in at least 20% of these patients. These figures, although lower than in xanthoma tuberosum, call attention to the necessity for careful search for possible systemic involvement in patients with xanthelasma. J. K.

CUTANEOUS NODULAR "ELASTEIDOSIS" WITH CYSTS AND COMEDONES. M. FAVRE and J. RACOUCHOT. (1951) *Ann. Derm. Syph.*, 78, 681.

This condition occurs on exposed areas, especially in the periorbital and temporal regions, the ears and nape of the neck. It presents as comedones and yellowish nodules, the latter sometimes resembling colloid milium but arising from the pilo-sebaceous follicle, which is often transformed into a cyst. There are marked degenerative changes in the upper dermis, which stains readily with elastic tissue stain though the exact nature of the change is not known. F. F. H.

NOTE ON THE HISTOLOGY OF BENIGN HEREDITARY FAMILIAL PEMPHIGUS, WITH A DISCUSSION ON ITS RELATIONSHIP WITH DARIER'S DISEASE AND PEMPHIGUS VULGARIS. A. DUPONT. (1951) *Ann. Derm. Syph.*, 78, 703.

Benign familial pemphigus is clearly distinguishable histologically from the two other conditions mentioned. In it there is a general disappearance of the filamentous connective structure of the epidermal cells, but these retain their vitality and continued to develop normally; the bulla formed is irregular in shape. In Darier's disease the epidermal cells after losing their filaments rapidly become individually keratinized, and a fissure develops just above the stratum germinativum. In pemphigus acantholysis of the prickle cells produces characteristic cytological changes and cleavage. F. F. H.

MIXED INFECTION OF CUTANEO-SUBCUTANEOUS TUBERCULOSIS WITH FUNGUS. F. FRITZ. (1951) *Derm. Wschr.*, 124, 953.

A farmer's son, aged 29, with slight maxillary adenitis on the left side of short duration had 2 left lower premolars extracted. Both sides of the neck became swollen hard and tender, but not fluctuant, and a fortnight after the extraction thick pus was obtained on puncture from both sides. No fistula formed. The pus contained actinomycosis, and a guinea-pig on inoculation developed miliary tuberculosis. The response to treatment with penicillin combined with supronal and later short-wave therapy and sollux lamp was satisfactory. M. S. S.

THE PRACTICAL VALUE OF THE TRICHOPHYTIN TEST. H. GÖTZ and W. THIES. (1951) *Derm. Wschr.*, 124, 1193.

The author's investigations prove that the trichophytin test is of very limited value. It may help to exclude ringworm when scrapings and cultures are negative and the diagnosis is in doubt. Of 384 patients clinically free from a mycotic infection and tuberculosis 63% reacted positively to trichophytin (1:300 and 1:50), of 80 suffering from a mycotic infection 90%, and from skin tuberculosis 77%. M. S. S.

BOECK SARCOID IN THE FAMILY. G. KLINGMULLER. (1951) *Derm. Wschr.*, 124, 1199.

The author gives an interesting summary of the literature on a simultaneous occurrence of sarcoid in more than one member of the family, and makes two series of observations of his own

involving 4 patients. As in occasional cases described in the literature there was a history in all 4 of active tuberculosis in the immediate family circle, anteceding the onset of the patient's disease, and in one instance at least the patient herself had had a previous banal tuberculous infection. The sarcoids showed great variety in their manifestation, but members of a family showed a tendency to react in the same way. Two sisters in the second observation had a malignant tumour in addition to the sarcoid. One came to autopsy and showed no evidence of tuberculosis.

M. S. S.

CLINICAL AND MICROSCOPICAL OBSERVATIONS ON BISMUTH PREPARATIONS. H. JUNG. (1951) *Derm. Wschr.*, 124, 1226.

The author examined 8 preparations of bismuth microscopically in relation to tolerance and therapeutic activity in syphilis. He found that a homogeneous dispersion of crystals in the suspension medium resulted in better tolerance and therapeutic activity than one where clumping of the crystals occurred leading to intolerance and uneven absorption. Bismogenol (Tosse) and Wismusan (Rodleben) were specially suitable for use. Purity of the medium is important.

M. S. S.

EXFOLIATIVE ERYTHRODERMIA AS THE INITIAL STAGE OF SIMMOND'S CACHEXIA FOLLOWING PAGET'S BONE DISEASE. TH. KRAJEWSKI. (1952) *Derm. Wschr.*, 124, 1265.

The author describes the clinical course and post-mortem findings, macroscopic and microscopic, in this patient, who before dying from Simmond's cachexia had Addisonian-like symptoms. Among other findings *post mortem* was a severely compressed and flattened hypophysis, the result of the Paget's disease, and haemorrhagic infarction and necrosis involving most of one adrenal gland.

M. S. S.

KIDNEY CHANGES FOLLOWING SKIN DISEASES. G. W. KORTING and H. DIETZ. (1952) *Derm. Wschr.*, 125, 7.

The authors found evidence of kidney changes in 1% of 10,000 patients with skin disease. Three groups showed a relatively high percentage: seborrhoeic eczema, eczematized seborrhoeic eczema and varicose symptom complex. Patients with accompanying cystitis, pyrexia, or having therapy with a potential kidney irritant, e.g., tar, were excluded, also patients with purpura. Albuminuria and in the sediment numerous leucocytes, microhaematuria or cylindruria were considered evidence of associated kidney change provided these findings were obviously influenced by the clinical state of the skin, e.g., both improving simultaneously.

M. S. S.

ECZEMA HERPETICATUM IN AN ADULT. H. KRIEGK. (1952) *Derm. Wschr.*, 125, 25.

The author considers the special point of interest here to be the occurrence of eczema herpeticum in an adult. Although the source of the infection could not be traced, the herpes simplex virus was demonstrated. The severity of the disease and fever present for 6 days abated 48 hours after the administration of aureomycin. A pure growth of *Staphylococcus aureus haemolyticus* had been obtained from the pustules.

M. S. S.

THE ACTION OF 40% OLOBINTIN ON ACTIVE MESENCHYME. R. SCHÖNFELD. (1952) *Derm. Wschr.*, 125, 30.

Olobintin is a solution of pure, completely acid-free turpentine in olive oil. Pyrexia and an increase in leucocytes are the most constant reaction to its injection, but good results have been reported without any subjective disturbance, or increase in leucocytes. A considerable rise in reticulocytes has been encountered in a severe general reaction.

The author uses the cantharides blister to test the influence of olobintin on the RES determining the qualitative content of the blister in inflammatory cells. Of particular importance are the lympho-histiocytes. Paralysis or damage to the system is represented by an exudate poor in lymphocytes, or cell-free; a heightened functioning, by an abundant content in lympho-histiocytic elements.

In the author's experiment 24 patients were tested (21 with eczema and 3 with ulcer cruris). A 2% cantharides plaster 3 × 1 cm. was applied on 7 successive days to normal abdominal skin for 24 hours; the amount of blister fluid was measured and its cellular content determined with a Thoma-Zeiss cytometer. A differential count was made of a stained centrifuged deposit. An olobintin injection (40%) ½–1 ml. was given following 2 cantharides tests. The effect of such an

injection lasts from the third to the eighth day, with leucocytosis and fever which falls by lysis. At the height of the reaction 5 further cantharides tests are applied. In health an average 1-8% lympho-histiocytic elements should be found, eosinophils ranging from 0-3%.

In almost all 21 eczema patients the first 2 values lay about 20%, indicating a certain stimulation of the RES as a result of the eczema. The 3 controls gave a practically normal result. In one group of 6 patients an increase in the number of lympho-histiocytes began even on the first day of the injection (in 3 patients reaching 50%), and rising steeply to the third day, returned already in the next reading to a normal value; the immediate reaction indicating an increased resistance. In a second group of 5 patients the first increase appeared between the third and fourth day and fell more gradually, reaching the lowest level on the sixth day, to rise slightly again, indicating a somewhat more prolonged defence stimulation of the active mesenchymal cells. A third group of 6 patients showed no rise till after the third day. There was then a gradual rise reaching between 50% and 30% on the fifth or sixth day, the fall sometimes steep, sometimes gradual, the final value lying almost uniformly above the initial value. In the fourth group of 7 patients instead of a rise there was a fall in the lympho-histiocytic elements beginning on the first day, probably indicating a temporary damage to the RES.

M. S. S.

TREATMENT OF PEMPHIGUS VULGARIS. I. ANDERMANN. (1952) *Derm. Wschr.*, 125, 49.

Following an account in the literature of the successful treatment of pemphigus vulgaris with rabies vaccine the author used Lyssa vaccine daily to treat pemphigus vulgaris with pyrexia in a child, aged 4 (KI test negative: blood eosinophil count 18%). Treatment was accompanied by a remission in the first 8 days, but this was followed by a relapse in which the bullae rapidly became purulent. After 20 injections the condition was unchanged.

M. S. S.

ARSENIC IN DERMATOLOGY. W. KRANTZ. (1952) *Derm. Wschr.*, 125, 50.

The author gives a long list of dermatoses for which arsenic is recommended in text-books and discusses most of them in turn. He comes to the conclusion that by withholding arsenic the progress of the dermatoses in question would scarcely be altered, and at the same time the patient might be spared some intoxication.

M. S. S.

COMPLEMENT-FIXATION REACTIONS FROM TUBERCLE BACILLUS, STAPHYLOCOCCUS AND STREPTOCOCCUS ANTIGENS IN ERYTHEMATODES PATIENTS' SERA. K. DENECKE (1952) *Derm. Wschr.*, 125, 73.

Complement-fixation reactions were generally weak, less often negative, in chronic discoid lupus erythematosus and strong in the acute case. The streptococcus antigen yielded most of the positive reactions, the tubercle bacillus only 3. In all 41 chronic cases and 1 acute were tested; also a further 9 chronic cases, and the acute one again, with streptococci obtained from the teeth; there was a strong positive reaction in the acute case and a negative one in the 9 others.

M. S. S.

ORAL MANIFESTATIONS OF DEFICIENCY DISEASES. H. SINCLAIR. (1952) *Practitioner*, 168, 133.

Deficiencies of several nutrients early produce structural changes in the tissues of the mouth. Deficiencies of certain vitamins of the B group are particularly important, viz., riboflavine, niacin, pyridoxine, folic acid, vitamin B₁₂ and also iron. All these substances take part in important cellular enzyme reactions concerned with the oxidation of substrates or the metabolism of protein. Deficiencies of either of two vitamins may break the metabolic chain at nearby links so that the signs of deficiency may be very similar. Other signs of deficiency must, therefore, always be carefully sought and the origin of the deficiency investigated. Diets deficient in one member of the B complex are likely to be deficient in others, so that it is important to correct the faulty diet rather than to treat the patient with one pure vitamin. A table shows that deficiencies of most members of the B group, as also of iron, cause cheilosis, angular stomatitis, smooth, sore and red tongue and ulceration of the buccal mucosa. The identification of the deficient vitamin must be made from signs elsewhere, which are detailed.

A. C. R.

GENERAL PATHOLOGY OF CUTANEOUS RETICULOSIS. SEZARY. (1951) *Rev. argent. Dermatosis*, 35, 112.

After a description of the R.E. cells and how readily they proliferate in response to any irritating stimulus Sezary separates reticulosis by inhibition and tumours benign and malignant, from

the cutaneous reticulosos proper, of which an exact diagnosis is often clinically impossible, so help must be sought from biopsy. He divides them into two groups according to the general type of cell proliferation; those with cells of the type commonly found in the usual inflammatory proliferation—they are not very sensitive to irradiation and the clinical course is generally benign—and those where the cells have irregular or lobed nucleus or several nuclei; these may be giant histiocytes or large cells with a big nucleus and little cytoplasm. Sometimes the cells appear to form a syncytium. Usually very sensitive at first to irradiation and to nitrogen mustard, they become less so, and sooner or later are the cause of death. Cells may or may not circulate in the bloodstream. The cells in the first group are orthoplastic, those in the second metaplastic.

G. W. B.

FUNGOID TUMOUR-LIKE PRIMARY RETICULOSARCOMA OF THE SKIN. D. A. UGAZIO, D. BRANDES and E. A. LIENHART. (1951) *Rev. argent. Dermatosisif.*, 35, 120.

On the left thigh of a man, aged 45, appeared a symptomless red scaly patch on which a tumour developed shortly afterwards. Patches appeared over the rest of the body and rapidly evolved to tumours. The clinical appearance was that of the *tumeur d'emblée* type of mycosis fungoides, but histological examination showed it to be a reticulosarcoma. The skin remained intact over almost every lesion. No internal lesions were found during life or after his death 7 months from the onset.

G. W. B.

RESULTS FROM ENDODERMAL INJECTIONS OF PENICILLIN. J. V. SÁNCHEZ NAVARRO and S. J. MOSTO. (1951) *Rev. argent. Dermatosisif.*, 35, 131.

Following the method of Comel the authors injected 20,000 units of penicillin in 0.2 cm.³ oil daily into the skin of a series of 50 patients suffering from various forms of bacterial epidermodermatitis. Some had obviously improved on the second or third day, others took 10–15 days to show improvement. They confirm Comel's claims, and think that this mode of using penicillin is worth trying. They think that the small amount of penicillin slowly liberated from the oil has a bacteriostatic action which gives the humoral defences time to act.

G. W. B.

RESULTS OF ANTIHISTAMINE THERAPY. E. BASSAS GRAU. (1951) *Actas derm-sif. Madrid*, 43, 207.

This records the results of treating 229 assorted dermatological cases with various antihistamines. These were most successful where the disturbance upset the permeability of the dermal vessels, e.g., urticaria, angioneurotic oedema, serum rash, solar dermatitis and insect bites. Whilst under treatment the erythematous element lessened without entirely disappearing, and when the drug was stopped reappeared in full intensity but the oedematous element did not. Where release of histamine was not the primary condition, as in the eczematous reaction, the results were not so satisfactory, the response was less than in hyperhidrosis, dyshidrosis and neurodermatitis. Papular urticaria was little influenced by antihistamines; the author got better results with diphenylhydantoin.

G. W. B.

PRIMARY SARCOMA OF THE SKIN IN XERODERMA PIGMENTOSUM. F. BERGILLOS DEL RIO. (1951) *Actas derm-sif. Madrid*, 43, 240.

A girl, aged 12, who had xeroderma pigmentosum for the greater part of her life and had had various warty epithelial tumours treated developed a swelling over the right zygoma which slowly increased in size. Histological section showed a polymorphous-celled sarcoma. There was no evidence to show that it had arisen from periosteum or cartilage. The tumour was inoperable and did not respond to irradiation.

G. W. B.

PARALLEL SERUM TESTING WITH THE V.D.R.L. SLIDE TEST, THE MEINICKE SLIDE TEST, AND THE PRICE PRECIPITATION REACTION. BALBIR SINGH and M. D. SHARMA. (1951) *Brit. J. vener. Dis.*, 27, 190.

A total of 4602 sera were tested in parallel by the V.R.D.L. and Meinicke slide tests and the Price precipitation test. No comments can be made on the specificity of these tests, which is of much more import than their sensitivity in serological tests for syphilis, and it has not been possible to collect sufficient data about the non-specific reactions given by those tests. With the object of excluding such reactions, doubtful or weak positive results were not taken into consideration except when they were observed in known cases of syphilis, or when they were found on repeated tests in sera from patients with a definite clinical history of syphilitic infection.

W. G. A.